

All About the Weather – Chapter 1 – The Hypothesis

06Aug04...

“Hi Gary, this is Clarence, how are you doing?” Clarence’s voice came over the phone.

“Getting by, Clarence, getting by,” Gary replied. “Did your leg heal up yet?”

“Finally, yes, but it left one hell of a scar,” Clarence announced. “What have you been doing to keep busy?”

“I don’t get out much now that I don’t drive and we only have one car,” Gary replied. “I mowed the front lawn yesterday and maybe I’ll mow the back yard on Saturday.”

“Did you know that Ron Adams had to have heart surgery?” Clarence asked, referring to a mutual acquaintance.

“I didn’t, no,” Gary said, “You knew that Ron Green had a pacemaker put in right?”

“That’s what I meant to say,” Clarence said, “Ron Adams had a pacemaker put in.”

“How’s your diabetes doing?” Gary asked.

“Staying around 150,” Clarence responded, “I just take an extra pill and get it back down. How’s yours doing?”

“Damned if I know,” Gary chuckled, “I get tired of sticking my fingers to test my blood sugar. But I must be doing something right. Last week I went to the doctor and got my latest lab tests. My cholesterol was 122, my triglycerides were 133, my Idls were under 100 and my hdl’s were in the high 30’s. And, my hemoglobin A1c was 6.4.”

“What’s that all mean Gary?” Clarence asked.

“It means that my blood sugar has been normal, and my low fat diet is working,” Gary summarized. “I’m so healthy I’d probably drop dead of a heart attack.”

“Well, I just called to see how you were doing, Gary,” Clarence replied indicating that the conversation was about to end. “You keep in touch.”

“I’ll do that Clarence, you take care,” Gary said, ending the conversation.

07Aug04...

“Hi Linda, is Ron there?” Gary asked.

“I’ll get him,” Linda replied, “How are you doing?”

“Same old stuff Linda,” Gary replied, “Another day older and deeper in debt.”

“I’ll get Ron for you,” Linda said.

“What’s up partner?” Ron asked.

“Nothing. Same ol’, different day,” Gary laughed. “Clarence called last night.”

“How’s he doing?” Ron inquired.

“His leg finally healed up. He also said that Ron Adams had to get a pacemaker like you did,” Gary related. “Do you still have your arm in a sling?”

“It will be another month at least,” Ron reported. “What have you been doing to keep busy?”

“I went to a website called ‘Australian Survivalist’ and read an interesting article about abrupt climate changes,” Gary shared. “It made for interesting reading. The strange thing is, it almost sounds like the climate we’ve been experiencing the past 10 years.”

“You don’t say,” Ron acknowledged.

“I’ll tell you what chief,” Gary said, “I downloaded the pdf file. I’ll send you a copy and you can read it for yourself.”

“Do that Gar-Bear,” Ron agreed, “Another one of those doomsday scenarios, huh?”

“That’s true Ron,” Gary said, “But this one is downright scary.”

After they finished talking, Gary sent the Adobe pdf file to Ron. One day, early in the prior week, Palmdale had experienced a series of power blackouts. Gary had been working on one of his fiction novels at the time and had finally set Microsoft Word to save the file every 60 seconds. His memory wasn’t too hot and sometimes he couldn’t even remember the last sentence he’d typed. He had sure longed for a standby generator on that day, backed up with a UPS on each of the 3 computers in the house. He figured that he ought to have a 15kw generator.

Most of the standby generators ratings were for their standby capacity, not their prime capacity. But, with a 15kw generator, he could generate 100 amps continuously, even if he didn’t need it. Then, assuming he could come up with the money, there was the problem of choosing a fuel for the generator. The choices seemed to be gasoline, diesel, natural gas, propane and the natural gas/propane vapor units. No one seemed to care much for the Generac units and the Onan units were recommended. He’d picked out an Onan RS 15000 from their website as his preferred model.

Gary and Sharon had talked it over and agreed that they probably wouldn't be able to afford the genset let alone the cost of getting it wired in, but it was something to add to his wish list. His wish list was fairly long and for the state of California, about ½ illegal. Gary wanted an M1A from Springfield Armory, specifically, the SA9805 Super Match, McMillan Marine Corps camo fiberglass stock, Douglas stainless steel barrel. He wanted one with the national match flashhider as well, not one of those danged California legal muzzle brakes. His wish list as far as that rifle went included 20+ of the USGI surplus 20-round M-14 magazines, a Harris bipod and one of those Surefire suppressors plus a couple of cases of Hornady Match ammo and a half dozen cases of the surplus ammo. Add to the rifle a really, really good scope, that was usable in most light conditions and he'd be set.

The second rifle he wanted was a Colt HR AR-15. Surefire made a suppressor for that rifle, the M4-FA. The suppressor reduced the sound about 30 dB and slightly increased the accuracy of the weapon upon which it was installed all for only 17 ounces of additional weight. Add another 20+ of the 30-round USGI surplus mags and 5 cases of 5.56 ammo and he'd have a rifle for Sharon or an assault weapon for himself. Gary didn't figure he'd want anything other than the iron sights on that rifle; it was more of a close in weapon.

And speaking of close in weapons, Gary fancied having a Remington 12-Express combo model 870 shotgun with a magazine extension and extra spring. That way, he'd have a hunting shotgun, although he wasn't much of a wing shot, and a defensive shotgun for the close up and personal defense. The 12-pellet 00 buckshot was only 2¾" long and what you gave up in pellets, you gained in slightly reduced recoil and more shells. A case or two of the buckshot and maybe a case of those 1⅞-ounce Brenneke slugs should be enough. Add an assorted case of hunting ammo to use with the longer barrel and you'd be set.

Most everyone recommended a .22 rifle for the survivalist's armory with preference being directed to the Ruger 10/22. Gary had owned any number of .22 rifles in his lifetime and he favored the Winchester 9422 over the Ruger, having owned both. For a couple of hundred bucks he could stock up on a couple of cases of the .22LR ammo and use it for trade in a TSHTF scenario. And for really close up work, there was the perennial favorite weapon, the handgun. Truthfully, Gary favored a large caliber, starting with .357 magnum and working its way up. He'd owned everything from a .22LR to a .44 magnum, and although he preferred a revolver, there was something to be said for the speed of reloading a pistol. In this regard, Gary favored the good old M1911 pattern for its alleged knockdown power. However, given a choice and a circumstance to carry a revolver, Gary wanted a Ruger Vaquero in .357 and a Winchester rifle to go along with it in the same .357 caliber.

Other things on his wish list included a store of foods and medical supplies, enough for the two of them for at least a year, possibly two. And, since it was just a wish list, Gary had added a diesel powered 4-wheel drive pickup with a camper shell to the list and a used, closed trailer large enough to haul all of their survival supplies in case they had to

bug out. Gary rounded out his list with some communications gear including a Ham HF radio transceiver, A VHF/UHF transceiver and a broadband receiver, all with appropriate, transportable antennas. His list also included a GPS receiver and a set of topo maps on CD Rom plus a laptop computer and a small, portable printer. The problem with road maps was that they told you where you were, but didn't really disclose the terrain.

But, it was just a wish list and Gary didn't figure it made much difference what he put on it. The likelihood was he'd be 80 years old before he had everything he wanted and had added to the list. As it was, he didn't have a driver's license and couldn't drive the pickup even if they owned a second vehicle. His health was a lot better than it had been when he voluntarily turned in the driver's license, but he didn't relish taking the written test and driving test and being subjected to a lot of questions about why he'd given up the license in the first place.

o

08Aug04...

"Hey partner, I read that article you sent me," Ron explained over the phone. "That's some scary stuff."

"I thought it might get your attention Ronald," Gary replied, "It's just a scenario, but given the weather over the past few years, it almost sounds like it's happening, doesn't it?"

"That it does," Ron agreed. "You have any plans to do anything about it Gar-Bear?"

"Ronald, all I have is a wish list," Gary admitted. "And you know the old saying, wish in one hand..."

"Let me ask you a question partner," Ron went on, "If you had the ability to actually get everything on your wish list, would you stay in Palmdale or move to another state?"

"You know how I've always written about moving to Arizona?" Gary asked. "I don't know that I would. I might prefer Nevada, because of the gun laws. I've got a friend who lives up in the Elko, Nevada area and he says you can do pretty well in his area. Says that the gun laws are pretty liberal, too. The problem is the climate Ron. My friend lives up at altitude and I expect he gets a lot of snow in the winter. So, I expect a guy would be better off in a state like Arizona. Why do you ask?"

"You know how I've always wanted to move over and live near my brother, Bob, right?" Ron asked.

"You've mentioned it a time or two, yes," Gary acknowledged.

"Well, as awful as it sounds Gar-Bear," Ron admitted, "There's no way that we can af-

ford to do it. Basically, we've just been sitting around waiting for Linda's father to pass away. When her mother died, we got out of debt with the proceeds of her estate. I even had a chance to scratch an itch and build up my firearms collection. But now, we're back to living off our income and that's all ended. Anyway, Linda told you how much her father has left her and her sister in her will, right?"

"She mentioned it yes," Gary said.

"I have really been doing some thinking since I read that article you sent, partner," Ron continued. "How much do you think you'd have free and clear if you sold your home?"

"I don't know, maybe \$110,000," Gary replied. "What does that have to do with anything?"

"Answer another question if you can before I answer that," Ron went on, "How much would it cost you for a doublewide mobile?"

"Anywhere from \$50 to \$70 thousand," Gary replied, "Depending upon what we bought."

"So that means that if you sold your home and bought a cheaper doublewide, you'd have about \$60 thousand left over, right?"

"Well, yeah, I suppose, but the lot rent would be pretty expensive and the alternative of buying a piece of land would eat up that money pretty quick," Gary commented. "What are you getting at?"

"It's only an idea at this point that Linda and I have talked over partner," Ron explained, "But we were talking about maybe buying a few acres in eastern Arizona and putting a mobile home on it. It would be big enough for Sharon and you to put a home on it too and I wouldn't charge you any lot rent. Another thing partner, these wind turbines you're always writing about have changed a lot over recent years. They tend to run up closer to $\frac{3}{4}$ of a megawatt in size. Now, if we put in a well and a wind turbine, all we'd need would be a propane supply to be completely independent. We could sell electricity to the power company and recover the cost of the wind turbine. It's what you write about all of the time, you know, a survivalist community."

"I could get with a program like that, my friend," Gary said, "And Sharon probably could too if we weren't so far from a community where she could find a quilting circle or something. But why would we want propane Ron, we would be generating our own electricity, so wouldn't we be better off with electrical appliances than propane?"

"Propane appliances are more efficient Gar-Bear and we would have to have a backup generator anyway," Ron replied. "We could go with a diesel generator since we would probably have diesel powered vehicles, or with propane and power our homes and the generator with propane."

“Ron I think I’d prefer to go with diesel,” Gary said, “In a pinch, we could manufacture our own biodiesel fuel and the electricity would power the appliances. The only way we could manufacture gas would be to have a large livestock operation and produce methane. Biodiesel can be produced from used vegetable oils and from crops we could grow. I rather ride a tractor than shovel cow and pig manure. Especially at our age.”

“So the bottom line is that you might be interested in what I’m proposing?” Ron asked.

“I expect so, partner,” Gary said, “But I sure would like to see Clarence come with us if we ever did such a thing.”

“I’ll talk to him about it,” Ron said. “Ciao.”

All About the Weather – Chapter 2 – A Death in the Family

Thursday, 02Sep04...

“Gary, Linda’s father passed away earlier this morning,” Ron announced over the phone. “We’ll be gone for a few days, but if you need anything, you have our cell phone number, right?”

“9215?” Gary asked.

“That’s it partner,” Ron agreed.

“Extend our condolences to Linda, Ronald,” Gary responded. “How long will you be gone?”

“Probably until the first of next week,” Ron replied. “Or maybe a day longer, I think that’s Labor Day and I don’t know what her sister has planned.”

“I’ll talk to you when you get back Ron,” Gary said, “I’m real sorry about the news.”

It turned out that the funeral was held on Saturday, September 4th. The only other alternative would to have been to hold the body until the 7th and that was too long. When they returned to Palmdale a day early, Ron and Linda stopped by Gary and Sharon’s to visit. Gary and Ron talked about the scenario Gary had forwarded to Ron and Ron told Gary what frightened him the most about what he’d read. According to the paper, “Ocean, land, and atmosphere scientists at some of the world’s most prestigious organizations have uncovered new evidence over the past decade suggesting that the plausibility of severe and rapid climate change is higher than most of the scientific community and perhaps all of the political community is prepared for. If it occurs, this phenomenon will disrupt current gradual global warming trends, adding to climate complexity and lack of predictability. And paleoclimatic evidence suggests that such an abrupt climate change could begin in the near future.”

“My father’s will is incontestable,” Linda commented, “So the estate should settle quickly. There is more than enough cash in the estate to pay the small taxes it will generate and provide for my sister and me. Most of the estate goes to charity, so there won’t be many taxes to worry about anyway. I think that Ron and I are going to go to Arizona and have a look around before we go up and visit Bob.”

The estate did settle rather quickly as these things go. By March of 2005, Linda had received her inheritance and Ron and she had bought 20 acres in eastern Arizona. They put their home on the market and Gary and Sharon followed suit, as did Clarence and Lucy. Most of Gary and Sharon’s furniture qualified for the junk bin, having all of those pets had been hard on it, so they donated the majority to charity. They kept their bookcases and bedroom furniture, except for the box springs and mattress, the tables and the office and sewing room furniture. Their home sold quickly and they ended up putting

their possessions in storage and living with Ron and Linda until their home, too sold. The six of them made a trip to the Arizona property and noted that the new well was in. Per instructions, the well driller had extended the well deep into the aquifer. Ron had also employed the services of a consultant and the base for the wind turbine had been installed.

They three couples made their way to Gallup, New Mexico and each purchased a doublewide mobile home. The dealer sent an employee back with them to the acreage and they staked out where the dealer should install the basements. All of the homes would face to the south to allow the warm rays from the winter sun to penetrate the homes. They then hurried back to Palmdale to empty Ron and Linda's home before the deadline. Clarence and Lucy also had their furniture in storage and had been living with Clarence's sister. Rather than hire a moving company, the three men worked out a deal with a guy who owned a tractor-trailer rig and they paid him and his friend an hourly rate to load and unload the trailer. Even with the mileage and the extra cost of unloading, they were a lot of money ahead.

So much money, as it turned out, that Gary and Sharon were able to get new furniture and barely tap their cash reserves. After they moved in, Gary spent his free time putting in category 5e cable throughout their new home. Gary replaced his 10/100 8-port switch with a 3Com Office Connect Gigabit Switch 8 and used the older switch for his printers. With his computer setup all wired in, Gary bought a Dell Inspiration laptop computer and scratched the laptop off his wish list. The laptop was a model 5150 with a 100Gb HDD. Gary added an external GPS receiver and mapping software that interfaced with his laptop. He also added a set of topo maps on CD-Rom. Following his time honored practice Gary copied all of the CD's, including Windows XP, Office, and all of his other software onto the HDD. It was a smart move, in a way, Gary redirected the software to look on the HDD rather than on the CD and he had a complete set of maps on a laptop.

Next, the men went looking for a gun dealer, preferably with a class III license and Gary laid out what he wanted to purchase. The dealer was quick to point out the problems with what Gary wanted, especially with regard to the suppressors. There were federal forms to fill out and a long waiting period until the feds gave clearance, the dealer explained. Nothing else was any problem, he said and he could fill the order from his inventory except for the M1A. Gary asked if that included the suppressors and the dealer admitted he had the two items in stock, but couldn't sell them without the necessary paperwork. Gary asked if he could reserve the items until his federal paperwork cleared, he was more than willing to pay for them now and wait for delivery. The dealer agreed to that, but said that there was no way Gary would get the suppressors until the paperwork cleared.

Gary asked if he could leave the AR-15 behind for the dealer to remove the flashhider and prepare the barrel to accept the FA mount for the Surefire suppressor. Gary also asked the dealer to prepare the M1A to accept the FA flashhider adapter for suppressor. Gary paid cash for everything, including the ammo he wanted. The dealer kept the AR-15 and said he'd attend to it and would modify the M1A when it arrived. The dealer,

frankly, had been afraid he was being setup by the ATF. But, the ATF didn't usually buy so much on one of their stings and when the M1A came in, the dealer mounted the Surefire 7.62 suppressor and slipped the M4 can on the Colt rifle. He hadn't bought his large supply of suppressors through regular channels anyway and he'd never known the ATF to use an old guy to make a sting purchase.

Perhaps the deciding factor had been that the other old guy, Clarence, had wanted a ST-58 with a Shadow suppressor and had bought an AR-15, a Ruger 10/22, a Remington 870 combo and an M1911. Clarence also bought the same amount of ammo as Gary. The dealer had asked Clarence about a suppressor for the AR-15 and Clarence had taken the paperwork, but not paid for either suppressor. More on a whim than not, the dealer went ahead and installed Clarence's suppressors when the AR and the ST-58 arrived from the distributors. He called the men and told them their weapons were ready to be picked up. Clarence, he advised, should be sure and bring along a bunch of cash. Gary had forgotten to mail the federal forms and Clarence had thrown them away.

Since the men had paid cash and had spent a lot of money, the dealer had thrown in hard-shell cases for the four rifles. Gary and Clarence opened the cases, saw the extra equipment and closed the cases without a word. Clarence pulled out his wallet and the dealer gave him a number. Clarence counted out the money without another word being spoken. Ron was rather surprised at the events that transpired that day and began to talk to the dealer about getting an identical M1A as the one that Gary had purchased and getting the same set of accessories. The dealer had Ron fill out another form 4473 for the two rifles and included the price of the accessories in the total. Ron bought the same amount of 5.56 and 7.62 caliber ammo as had Gary and Clarence.

Gary asked Sharon to sew up 3 cases for each of his two suppressors so that they could carry them on their ALICE gear. And, Gary went down his wish list and struck off the firearms and the generator. Ron had put in a used 60kw diesel generator to backup the wind turbine that was now up and running. He had also buried several fuel tanks and topped them off with diesel fuel. The fuel wasn't free, but all they had to do was sign for it and Ron billed them once a month for their usage. He had gotten a very good price by buying in bulk and had passed the savings along to them. Gary and Sharon had traded the old Skylark in on a used diesel pickup. Although a year old and registering 20,000 miles on the odometer, the pickup hadn't been that much cheaper than a new model. But, it had a camper shell and that was what they wanted. Besides, with 20,000 miles on the vehicle, they presumed that the previous owner had debugged the vehicle for them. Clarence and Lucy also traded in their car for a diesel pickup, a new one, as had Ron and Linda.

The used generator had gone in the basement of a storage building Ron had erected on the property. The basement also held a large rack of storage batteries to provide power without forcing the generator to kick on when the wind waned. The batteries would provide enough power for up to 24 hours before the transfer switch was tripped, kicking in the generator. The unit had been a Cummins Power rental unit and had been completely refurbished before sale. No more than they anticipated using the unit, Ron thought

that used was plenty good enough.

As things now stood, they still had to fill the storage building with food, lie in extra medical supplies and buy the communications equipment. Although Gary and Sharon and Clarence and Lucy had enough money to go ahead and do that, and Ron and Linda still had a lot of money, they decided to spend \$1,000 each per month until the food supplies were stocked. That still left Gary and Sharon more than enough to live on and allowed them to buy communication equipment when the trust fund made its periodic distributions.

Gary got Dr. J to write large prescriptions for them and he filled them from a Canadian source when he'd saved up enough money. The only drugs that Gary couldn't get was the Xanax and the Vicodin, but his supply of those drugs was large and he had a prescription he regularly filled each month, even though he didn't take any Vicodin and very little Xanax. Gary also filled his prescriptions on a monthly basis. Ron had gotten almost a six-month supply of his drugs from his Doctor in Lancaster before he left and prescriptions for another years supply. He too filled the prescriptions from the Canadian source.

When it came to drugs, Clarence was in a most unusual spot. His physician gave him a three-month supply and prescriptions for a year's supply of his drugs as well as prescriptions for his regular maintenance dosages. Clarence took some of the same drugs that Ron did and they were very expensive. Lucy and he simply could not fill the one-year prescription. Lucy mentioned it to Linda and Linda had Lucy give her the prescription forms. She would fill the prescriptions for them and they could pay it back over a one-year period.

Food and first aid supplies came from several sources. They bought some from Emergency Essentials and some from Walton Feed and still other items from Nitro-Pak just to mix it up. When the trust fund distributed money, Gary ordered radio equipment from AES, Amateur Electronics Supply. He started with the all mode Kenworth HF/VHF/UHF transceiver. He put up a Comet tri-band antenna and an MFJ model 1798 10-band Vertical. Finally, he added a receiver and a Diamond D 130J antenna. Each of the homes had a Galaxy SSB CB base station and each of the vehicles a matching Cobra 148 GTL SSB CB radio. These were strictly for local use and didn't need amplifiers or anything to boost the signals. The acreage wasn't but 20 acres and it was maybe a third of a mile from the homes to the furthest corner.

Sharon had found a quilting group in the nearest community and she was content to go to town once a week for the day for her 'hen session' as Gary called the groups. Back in California, Gary and Sharon's daughters, Lorrie and Amy were getting by. Amy's divorce from Udell had been final in January of 2005 and she and the kids lived in a small apartment. Amy was still going to college and struggling, but she was getting by. Lorrie and David must be getting along ok too, Lorrie rarely called and then it was usually for advice about some problem she was having with Jeffrey.

Linda's son John had gotten an apartment with Kevin, but had soon tired of Kevin and booted his butt out. The last John had heard, Kevin was shackled up with his latest girlfriend. Damon was still working at the insulation job in Mason City as far as Gary knew, and Derek was back from Kosovo and back at his old job. Ron and Linda's daughters were still in Austin and in Ft. Smith. Brenda was still trying to get her kid back, but the judge wasn't buying her act. Brenda, it seemed, had a major drug problem, probably on par with that of her brother Kevin's.

Drugs, booze and a decaying morality pretty much described the US in the early summer of 2005. The war in Iraq wasn't faring much better than it had the year before and fortunately there had been no additional terrorist attacks, yet. And, there was that scenario put forth on the pdf file that Gary had downloaded from that website and shared with Ron. According to the file:

Following the most rapid century of warming experienced by modern civilization, the first ten years of the 21st century see an acceleration of atmospheric warming, as average temperatures worldwide rise by .5 degrees Fahrenheit per decade and by as much as 2 degrees Fahrenheit per decade in the harder hit regions. Such temperature changes would vary both by region and by season over the globe, with these finer scale variations being larger or smaller than the average change. What would be very clear is that the planet is continuing the warming trend of the late 20th century.

Most of North America, Europe, and parts of South America experience 30% more days with peak temperatures over 90 degrees Fahrenheit than they did a century ago, with far fewer days below freezing. In addition to the warming, there are erratic weather patterns: more floods, particularly in mountainous regions, and prolonged droughts in grain-producing and coastal-agricultural areas. In general, the climate shift is an economic nuisance, generally affecting local areas as storms, droughts, and hot spells impact agriculture and other climate-dependent activities. (More French doctors remain on duty in August, for example.) The weather pattern, though, is not yet severe enough or widespread enough to threaten the interconnected global society or United States national security.

As temperatures rise throughout the 20th century and into the early 2000s potent positive feedback loops kick-in, accelerating the warming from .2 degrees Fahrenheit, to .4 and eventually .5 degrees Fahrenheit per year in some locations. As the surface warms, the hydrologic cycle (evaporation, precipitation, and runoff) accelerates causing temperatures to rise even higher. Water vapor, the most powerful natural greenhouse gas, traps additional heat and brings average surface air temperatures up. As evaporation increases, higher surface air temperatures cause drying in forests and grasslands, where animals graze and farmers grow grain. As trees die and burn, forests absorb less carbon dioxide, again leading to higher surface air temperatures as well as fierce and uncontrollable forest fires. Further, warmer temperatures melt snow cover in mountains, open fields, high-latitude tundra areas, and permafrost throughout forests in cold-weather areas. With the ground absorbing more and reflecting less of the sun's rays, temperatures increase even higher.

All About the Weather – Chapter 3 – The 'Weather' Report

By 2005 the climatic impact of the shift is felt more intensely in certain regions around the world. More severe storms and typhoons bring about higher storm surges and floods in low-lying islands such as Tarawa and Tuvalu (near New Zealand).

It has long been thought that the great Ice Ages came and went on time scales measured in thousands of years, and less momentous changes – such as the Holocene Maximum or the Little Ice Age – over the span of several centuries. Current studies and more recent paleodata have revealed quite another face of the climate system, called "abrupt transitions," in which major shifts in some components of the Earth's climate are accomplished on time scales of decades or less.

*Initially proposed, and later verified, was the revolutionary notion that the large-scale circulation in the North Atlantic could persist in one of two patterns, or states, both of which were quite stable, with the possibility of abrupt switching between the two. In the first, the warm Gulf Stream that flows along the eastern coast of the US continues northward, reaching beyond the British Isles to the Norwegian Sea, ameliorating the climate of northwest Europe. James Joyce aptly referred to this condition in *Ulysses*, when he wrote that "All Ireland is washed by the Gulf Stream."*

In the other possible mode, the northward extension of the Gulf Stream is weakened by a reduction in the salinity of surface waters in high latitude regions of the North Atlantic. With less salt, seawater is not as dense, and is less able to sink during normal winter-time cooling. Restricting the ability of the North Atlantic to circulate water downward limits the amount flowing in from the warm Gulf Stream. The result of this "short-circuit" in ocean circulation is a much cooler climate for all who live downstream, including Northern Europe.

The surprising evidence from the paleoclimate record is how quickly the switch between warm and cold states can be accomplished. Evidence from ice-age portions of recent Greenland ice cores suggests that changes of this sort may have taken place in the past in the span of five to ten years. These abrupt transitions are most likely linked to an increase in the release of icebergs from continental glaciers, which on melting contribute large volumes of freshwater into the ocean, systematically reducing the local salinity.

Whatever the cause, we now know that in at least the North Atlantic the climate system can change very rapidly. Might ocean circulation change as rapidly in the future, perhaps as a consequence of other significant changes in the system? The answer is "maybe." There are no permanent ice sheets today on the North American continent, as was the case in the past, but melting of Arctic sea ice or the extensive Greenland ice cap could well influence ocean salinities. Increased precipitation over the North Atlantic, induced by warmer temperatures, could also reduce the saltiness of seawater, short-circuiting the ocean circulation in a manner similar to what occurred during the ice ages. In fact, greenhouse models call for such a change in precipitation, and the present rate

of warming in the subpolar North Atlantic – less than what is recorded in the rest of the world – is also in agreement with what should happen as a result of an altered state of ocean circulation. A test of the models is whether the slower warming of the subpolar North Atlantic will persist.

According to a July 2005 special presentation on the Discovery Channel, tests were showing that the carbon dioxide levels were far above normal, perhaps by as much as 250% higher, and that this concentration of the so called greenhouse gasses was causing an extraordinary ice melt around the world. Greenland was losing its layer of ice far faster than predicted. Even the ice at Antarctica was disappearing at an abnormally high rate. What's more, that hole in the ozone layer over Antarctica was expanding at an unusually fast rate. The Discovery Channel broadcast went on to attribute a portion of the increase to the burning of the rainforests in South America and another portion of the increase to the continuing increase of fossil fuel consumption by the Americans.

Primarily due to the continuing unrest in the Middle East, the price of crude oil had reached over \$85 a barrel, but Americans just complained about the fuel prices and kept buying gasoline. In eastern Arizona, Gary, Ron and Clarence had heard about the show from several cable channel ads and had tuned in to watch it. The three of them were well on their way to becoming independent of the crisis, but the show only served to further alarm Ron and Gary. Ron said he was going to find a used tank and start to accumulate used vegetable oil products from every restaurant in a 50-mile radius of their acreage. He told Gary to read up on that biodiesel stuff and let him know what he found out. Clarence was mostly lost through this conversation and he asked Ron and Gary to explain it to him. Rather than bother with the explanation, Gary told Clarence that he would copy a file, *abrupt_climate_change_scenario.pdf* to Clarence's computer via the gigabit Ethernet network that joined their computers and Clarence could read it for himself. After Clarence had read the file, he asked if the 3 of them could get together.

"So, let me get this straight fellas," Clarence began, "The two of you are worried that the world is about to undergo an abrupt climate change, is that right?"

"Well, my friend," Ron said, "It was pretty much speculation, but yeah, you hit the nail right on the head. That show we watched on the Discovery Channel just reinforced what Gary and I have come to believe is a likely scenario and we both believe that we're already well into it."

"Clarence, did you catch the bit near the end of that program where Woods Hole was reporting changes in the salinity of the Atlantic Ocean?" Gary asked.

"Well, yeah, now that you mention it, I guess that I did," Clarence admitted. "Didn't make no sense to me at the time, but after reading that scenario, I see what they were getting at."

"Anyway, we have plenty of time to build up our supplies, partner," Ron added, "Accord-

ing to that scenario, the first thing we might see is storm surges that take out islands and after that, we could start to see levees and dikes breaking up and flooding in some places around the world. If any of that starts happening, then we can assume that the scenario might have some merit. And, if it doesn't, just think how darned nice it is to be living somewhere other than California."

"There is that, Clarence," Gary said, "At least we can own 20-round magazines for our rifles without worrying about getting put in jail."

"And in the meantime, the two of you just intend to keep building up survival supplies?" Clarence asked.

"Not just yes, partner, but hell yes," Ron laughed. "Properly taken care of and periodically putting additives in our fuel supply will keep that diesel fuel good, probably forever. And if we service our vehicles and that generator periodically, they'll last a long time too."

"What's this biodiesel you and Gary were talking about?" Clarence searched for information.

"Clarence for a little over \$3,000, we can buy a processor that will produce between 86-88 gallons of biodiesel fuel per batch," Ron explained.

"Where you get something like that?" Clarence asked.

"A company called Biodieselgear dot com sells it," Ron said.

"Is it hard to do?" Clarence asked.

"I don't know partner," Ron said, "But I doubt it. You add a little alcohol, usually methanol, to the strained vegetable oil; then you add a catalyst, usually sodium hydroxide, and the machine does most of the work. We can make a batch a day and either store it separately or mix it with our diesel fuel. And we can produce our biodiesel for under a buck a gallon."

"How dangerous is it?" Clarence asked.

"Not very, according to my readings," Gary offered. "You have to be careful with the chemicals, but it's no big deal."

"How big a tank you going to put in for the used oil?" Clarence asked.

"Not sure Clarence, probably not very big," Ron replied, but the storage tanks for the product will be the same size as our diesel storage tanks. Depending upon how much diesel fuel we use, we can probably get by with one or two more storage tanks. The thing is, once we were starting collecting used oil from restaurants, we'll have to keep it up

or they'll find someone else to give their used oil to.

The conversation ultimately resulted in each man taking on a task they deemed relevant to their circumstances. Gary was assigned to surf the web and get all the information he could on abrupt climate changes. Ron was in charge of acquiring the biodiesel processor, the tanks and locating sources of used vegetable oil. Clarence was left to see that everything ran smoothly on the acreage and to continue with their preparations.

ADSL wasn't available to the acreage due to the distance from the phone company's central office. This left Gary to using a dialup connection to surf the web. Back in Palmdale, all three of the men had SBC DSL and had renewed their contracts at the higher speed SBC had offered in 2004. Now, faced with a massive research project on the net, Gary rapidly became frustrated with the snail's pace of his dialup connection. He checked out ADSL, SDSL and T-1 line availability in their area and came to the conclusion that they should put in a leased T-1 line and purchase fractional availability. He visited with Ron and Clarence about the issue and they authorized him to spend the \$460 a month that T-1 access cost. They could handle the costs if they pooled their incomes. Once he had the T-1 up and running, they had the single T-1 line, three phone lines and three fax lines with the fax lines connected to their computers.

Ron purchased the biodiesel processor and had it installed in a small building he had erected for the purpose. He also had a large tank installed for storage of their biodiesel production and a smaller aboveground holding tank installed next to the processing building. Then, he set out to contact every restaurant and business within a 50-mile radius that used vegetable oils in their operations. Donut shops seemed to be his largest suppliers. He discovered that some restaurants didn't change their frying oil frequently enough and he passed on offering to take their used oil. According to the information Gary had gleaned from the net, if the oil was used beyond a certain point, it didn't make good biodiesel. By the time Ron had contacted all of his potential suppliers, he had commitments from sources that would supply about 250 gallons per week of the used vegetable oils. He scheduled a pickup run for every Monday, unless Monday was a holiday.

Clarence purchased an additional 2 months of foodstuffs while his partners were completing their projects. However his August purchase included several containers of heirloom seeds from Walton. He put in what amounted to a corral or a dry lot using steel posts and smooth #9 wire. He bought a tractor-trailer load of alfalfa bales and a truckload of processed feed from an elevator. The alfalfa was stored under a pole type shelter as was the feed, which was piled on a large tarp. Finally, Clarence bought 3 feeder cattle ranging in age and size from just weaned to a few months short of market weight. When he saw an ad for deep freezers on sale, Clarence added 3 chest-type freezers to the supply building. To get them started, he purchased 2 sides of Black Angus beef, all cut and wrapped from an area butcher. He also made a killing on frozen vegetables when an area market ran a no-limit sale.

Sunday 14Aug05...

“That Internet access line you put in sure is fast Gar-Bear,” Ron commented.

“It should be for \$460 a month Ron,” Gary replied, “And I got a deal on long distance service, too so our long distance bills are going to be very small. Anyway, I bookmarked a few hundred websites and printed out information from a lot of them. You’d be surprised how much information there is on the web about abrupt climate changes. Of course, a lot of it is contradictory, but we should be able to sort out the most likely scenario based on what we hear on the weather reports and what we can pull off the Weather Channel on the net.”

“I see that we’re in the cattle business Clarence,” Ron observed.

“Yeah Ron, I put in 3 deep freezers and filled one with frozen vegetables and a second with some of that good Black Angus beef. The other one is mostly empty, though.”

“Clarence, grocery stores usually buy chickens by the case,” Gary pointed out. “We could buy a couple of cases of chickens and vacuum seal them to keep them from freezer burning. We could also buy a few cases of pork cuts and add them to the freezer.”

“I’ll do that with the September food purchases,” Clarence agreed.

“How are you coming with that biodiesel project Ronald McDonald?” Gary asked.

“I got 6 55-gallon drums to haul on my pickup and collect the used oil,” Ron reported. “I’ve been getting anywhere from 200 to 300-gallons of used oil a week. Since that holding tank is only a 1,000-gallon tank, I’ve already had to process some of the oil. It’s not that difficult as long as you’re careful with the alcohol and that lye stuff.”

“I’ve been researching the shelf life of biodiesel and looking for stabilizers,” Gary announced. “I found a study that evaluated biodiesel shelf life and some additives. The maximum shelf life of pure biodiesel is about 12 months. However, they found some additives that had some possibilities. I’d suggest that we burn our biodiesel as we produce it and store the #2 diesel fuel. PRI-D will keep it going forever.”

“Fellas, I got to looking at the lay of the land for this acreage,” Clarence jumped in. “It seems to me that the entire acreage slopes downward to the west. If we were to do a little grading, we could probably create a water storage pond on the west side. That might give us extra water to irrigate with and maybe we could even stock some fish.”

“I guess it’s worth looking into Clarence,” Ron replied. “We need to get a used tractor with a blade and loader anyway. By the way, I’ve been burning some of that biodiesel in my pickup just to see how good a fuel it is.”

“How’s that been working out?” Gary asked.

“Sort of been getting mixed results,” Ron explained. “It burns good, but it must have some solvent properties. I’ve gone through a fuel filter a month and had to replace some seals in my truck.”

“Sounds like when they first introduced gasohol in Iowa in the late ‘70’s,” Gary said. “Had the same problem. But once you get your system cleaned out, you shouldn’t have any more trouble.”

“Gasohol reminds me to bring up another subject Gar-Bear,” Ron went on. “Why are we buying alcohol when we could manufacture our own ethanol? If we made our own alcohol, the only component we’d have to buy for our biodiesel is the sodium hydroxide and whatever we decide to use to stabilize the fuel.”

All About the Weather – Chapter 4 – Hard Work

Ron contacted the BATF to see what they would have to do to produce their own alcohol. The BATF wasn't known to be very generous with licensing of distilleries, but when they inspected Ron's biodiesel production facility, they issued the necessary permits. Ron had bought a very old diesel powered tractor with a loader and blade and a posthole auger. He had the dealer rebuild the engine and transmission on the tractor and clean out the fuel tank. Even so, they still went through fuel filters at an above average rate until the tractor cleaned itself out. The pond was Clarence's idea, so Gary and Ron just let Clarence do his own thing building the pond. Clarence first did some grading to channel the water towards the center of the west property line and then began to put in the pond. It took him from the middle of August until the first of November, but eventually he had a 15' deep 'pond'.

Gary had taken over Clarence's duties with respect to the supplies and he bought a vacuum sealer and several rolls of bagging material. He bought the pork and chicken in case lots, vacuum packed the chicken and cut and vacuum packed the pork. By the time he was done and the market ready beef was butchered, all 3 freezers were full. Ron had read all of the material on preserving biodiesel and had opted to try additive #5. The only test of how well that particular additive would fare would be the test of time. However, in the dozen weeks since they had last discussed everything, he had produced another 3,000-gallons of biodiesel. Even with Clarence running the tractor 12 hours a day and Ron's trips around the area to pick up the used oil, they were gaining on their supplies of fuel.

There had been a couple of brownouts during the height of air conditioning season, but they hadn't even known about it until they turned on the news. The acreage, which was above 4,000', was an energy exporter, not an importer. The Weather Channel reported a typhoon south of the equator in the western Pacific Ocean. Apparently several low-lying islands had been all but washed of the face of the planet.

The National Geographic Channel announced that they were going to air a program discussing the abrupt climate changes that were occurring to planet Earth. The fellas had taken advantage of one of those ads on TV where you could get 3 satellite receivers for your home and had put in a satellite TV dish. They then divided the 3 receivers up among themselves and each had full access to satellite TV. The only addition they needed was a line amplifier to boost the antenna signals between the dish and Gary's and Clarence's homes.

With the November food purchases, they deemed themselves sufficiently prepared for any potential catastrophe. From this point forward, it was going to be a matter of producing most of their own food and replacing those stores that they used up to keep the food rotated. When he had finished building the pond, and sealed it with bentonite, Clarence had graded a backstop for them to set up a 300-yard shooting range. Gary and Sharon were particularly flush in November and Gary bought a used golf cart from a guy down in Mesa. Not to be one up'd, Clarence and Ron soon followed suit.

All this did was further reduce their consumption of the diesel fuel and soon they began to think that they might run out of storage space. Ron calculated that their net cost of producing biodiesel had fallen to ~ 75 cents per gallon. They used electric heat to distill the alcohol, which they produced from bulk raw sugar. Ron had to put in another tank just to hold the anhydrous alcohol he had produced.

The National Geographic Special Presentation had recounted much of the information that the Discovery Channel had reported earlier. It seemed to have even used some of the same footage. However, NGC also reported that the salinity of the Atlantic Ocean was dropping much faster than had been anticipated. They also went on to report the scenario that had led Ron and Gary to start this whole business in the first place. It didn't appear that the abrupt climate change would produce anything like the effects shown in that movie the year before, *The Day After Tomorrow*, but the effects, though less dramatic, were going to be crippling if things continued as they were. References were also made to continuing drought in the US and the effect it was having on agricultural production. US exports of grain and other foodstuffs had fallen sharply, the program noted, and unless there were an extended periods of rainfall, they could be expected to drop even further.

"How would you feel about my putting in some more basements for homes Ron?" Gary asked after the program.

"What do you intend to do partner, move all of your kids to the acreage?" Ron asked, joking.

"Exactly," Gary said and he wasn't joking. "I figure we have about 4 years before this whole thing comes down around our ears. We could put in 4 basements in one year for our 4 kids and then start adding homes as we could afford them."

"You know Ron," Clarence added, "I was sort of thinking the same thing. My sister lives there in Palmdale and rents an apartment. If Lucy and I were to put in a basement and finance another doublewide, she could move over here and pay the payment and the taxes. It would still be cheaper than the rent she pays in Palmdale for that apartment she has."

This in turn got Ron and Linda to thinking and talking about their children. Paula was in Austin, Jennifer and Brenda in Ft. Smith and John was in Santa Clarita. They had no idea where either Scott or Kevin was, probably in jail if they were holding true to form. Linda made the final decision; it was after all her money that would be financing the majority of the costs of putting in extra homes and basements. She 'suggested' that Ron get together with Gary and Clarence and see if they could get a deal if they put in 9 basements all at once.

"Anyway, Linda wants me to see about our putting in all of the basements in one fell swoop," Ron explained.

"I can pay for one," Clarence replied.

"I can't," Gary said, "We only could pay for 2 right now and that would leave us a little strapped. But maybe we could get a loan or something if there is a big enough discount on these basements. I don't suppose it would hurt for you to at least check it out, partner."

Ron found a contractor who he talked with at length. The contract explained that if he could reduce the amount of excavation, he could give them a break on the costs of the basements. After he looked the acreage over, the contractor proposed to cut a trench wide enough for the basements and long enough to hold all 9. It would be up to the three men to back fill the trench and seal the basements. All he was offering for the money, \$4,500 per basement, was the trench, foundation, utility intake/outflow pipes, the slab, concrete walls and the I-beams.

"So there you have it fellas," Ron explained, "Basically 10% off on the basements. I think Linda and I will go ahead with the project."

"You can count me in," Clarence agreed.

"Man, the most we can come up is with \$10 thousand, partner and that won't leave us with any rainy day fund," Gary explained.

"Put up \$9 thousand Gar-Bear and Linda and I will carry you until you get a distribution from your trust fund," Ron suggested. "You can repay us by installing the phones and the computer network to the homes. That way, you won't have any interest either."

Gary realized that his network wouldn't properly support 9 additional computers in a peer-to-peer configuration. That meant going to a client-server network and that was way over his head. But, he was already a step ahead of the game because he knew that much. He figured he could put in a stackable 24-port gigabit Ethernet switch and continue with the category 5e wiring. They would have to eventually put in a server for the network and have someone configure an unmanaged system for them. He'd use his HP 9000 LaserJet and his HP 1220C Inkjet as network printers and connect the G85xi direct to Sharon's computer. He could, in the meantime, put in the pre-wired category 5e cables. And, when they selected a switch for the entire network, they would have to be certain that the switch could reach all of the nodes.

CNN was reporting that the annual catch Japan had gotten had been steadily dropping over that past several years. Gary wondered, as he read the article, if that had anything to do with the possible abrupt climate change that he and Ron were worried about. Gary didn't know if that meant that fish were dying off or migrating to different climates, perhaps both. Although given the way that Japan virtually mined the oceans for fish, it could just be fishing pressure. Then a second article caught his eye and it discussed a similar problem that was affecting the north Atlantic. Maybe it was a climate change af-

ter all.

The contractor not only put in a large enough trench to hold the 9 basements, but also used a trenching machine to cut in a trench from the well house to the main trench, a trench from Gary's basement to the main trench and a third trench to the septic system they had installed. Ron agreed to pay the guy a little extra to excavate addition spots for septic tanks and to cut trenches for the leach lines. As before, the leach lines were buried deep to allow the water to be sufficiently filtered before it reached ground level. Come the spring of 2006, they intended to plow up an acre or so of the ground and put in their first garden. The three of them installed the additional septic tanks and the outlet lines and after running a large line to the main trench, used the tractor and blade to replace the dirt over the septic field.

Meanwhile, Gary found a website that showed him how to wire up the category 5e cables. They even sold an easy to use connector so he could get by just buying a spool or two of the cable and running it to the new basements. The cable came in 1,000' spools and following his tried and true principle that if it cost more it was better, Gary ordered 2 spools of the expensive cable at \$200 + per spool. He intended to run a separate cable to each home. If the people in the home wanted to have their own network, they could just put in their own switch and cables. He put in PVC conduit, but waited until the basements were done before attempting to run the cables.

After the contractor had completed the basements and had gone on his way, it fell to Ron, Clarence and Gary to seal the basements from the elements and to route the plumbing and wiring. It wasn't until after the contractor had left that Ron realized that he hadn't had the man put in a trench from the storage building where the electrical service center was located to the main trench. The three men rented a trencher and cut their own trench for the electrical service. It was too cold, by this time, to work for very long outside, it being January of 2006, so they just did a little bit each day. Once the conduits were in, they deferred pulling cables until spring and instead filled the trenches and called it a season.

01May06...

Gary and Sharon finally had Ron and Linda paid off and a few dollars saved up. However, the cost of keeping themselves supplied with their medications, reimbursing Ron for the fuel they used and buying food didn't really allow them to save up much money. On a good month, they might gain \$300 and on a bad month, nothing or even use up a portion of their savings. On the other hand, electricity was free because Ron and Linda were recovering the cost of the wind turbine slowly from the excess electricity that they were selling to the utility company through a grid tie. Water was free, too and they hauled their trash to the county landfill once a month. They sorted their trash as well as they could and were recycling aluminum, glass and paper. The money they were getting for the recyclable materials more than offset the cost of dumping the remainder of their trash.

Not all of their glass went to the recycling company. They made it a practice to buy products that came in the 1 quart and 1 pint Mason jars and they were beginning to accumulate a lot of those jars. Nevertheless, when Ron found a clearance ad on the net, he stocked up on the jars, filling a fair part of the storage building with the jars, rings and lids. They also had the lids on clearance and Ron bought a few cases of those. He figured that once the lids were sealed, they could always take off the rings and use them on the next batch of jars.

They were very selective when they put in their first garden. They only planted foods that all three families liked. The first garden included potatoes, green beans, cucumbers, beets, corn, lettuce, cabbage, onions, tomatoes, peppers, peas, squash and carrots. Some things were impractical to grow, like rice and dry beans and they could and did buy them by the 100# bag. Other things, like the Swiss Chard, were strictly a seasonal item and they only planted a little. Gary found that if you needed to know how to store something, all it took was an inquiry on the net. Potatoes, for example, should be cured and then stored in the dark at 38-40 degrees F. They threw up a wall in the basement of the storage building and turned off the heat registers, creating a perfect storage location. They added a couple of fans to insure air circulation and they were ready when the first potato crop could be harvested.

Lucy put in an herb garden and grew a lot of the spices that they needed when it came time to start canning. They had 4 pressure cookers and could can about 2½ cases of vegetables (28 jars) at a time. With the three women staggering the pressure cooker start times, and the men hauling the cooled jars to the storage building, they were spending more time gathering than they were canning. All 6 of them got involved in snapping the green beans and preparing the vegetables for canning. It seemed clear as they went along that they could use up the frozen vegetables and turn that freezer into another meat storage case. It was a long lazy summer in 2006, punctuated by periods of frantic activity when another crop was ready to harvest and can. And, once the canning started, it didn't seem to end. And despite Ron's volume purchase of canning jars, they found themselves eventually running short of both jars and lids.

The cucumbers became dill pickles, sweet pickles and bread and butter pickles. The green beans, corn, carrots, beets, peas and tomatoes ended up canned either as a pure product or as a sauce, such as spaghetti sauce or tomato sauce. After one very long, hard summer, their food stocks had grown significantly. They reviewed what they had gotten from the one-acre garden and decided that they needed to reduce their production until the population began to grow. Did I forget to mention that Clarence had planted watermelon? But, I don't suppose that surprises anyone does it?

Along about August, during a break in the canning, Ron suggested that come spring they ought to put in a chicken coop and raise their own chickens and produce their own eggs. It came up while the men were taking a break from pulling the electrical, phone and computer cables. When the men weren't busy helping their wives, they were either pulling cables, slapping tar on the basement walls to waterproof them or back filling around another completed basement. The simple fact of the matter was that the only

day they'd taken off since they'd put in the garden was Independence Day. The cattle had to be fed, the garden weeded, the basements finished off and the utilities installed. They figured that God willing and the creek didn't rise they'd be done by Labor Day. Of course, there were still potatoes to be harvested and cured and stored. As it was, Ron had to force out the time to collect the used vegetable oil and he often worked well into the night producing the biodiesel.

All About the Weather – Chapter 5 – Catching Up

04Sep06, Labor Day...

“Dang it partner,” Ron remarked to Gary, “We’re supposed to be retired and disabled. I can’t remember working harder in my life.”

“We are building sweat equity in those homes Ronald,” Gary pointed out, “And you’ll have to admit that we have a lot of food put up.”

“But Gary,” Clarence protested, “We haven’t even had a chance to go fishing one time. I’ll bet those fish we put in the pond are monsters by now.”

“Fellas, we only have two homes to tar besides backfilling the third,” Gary observed. “Give us a month and we’ll have the basements completed and ready to set homes on. All the wiring is pulled and the plumbing in so as soon as we tar those exterior walls, we can finish the backfilling.”

“I’ll have to be honest here Gar-Bear,” Ron said, “Sometimes I wonder if it’s all worth it. We’re ready, but where is the big catastrophe we’ve been waiting for?”

“Haven’t you been following the news amigo?” Gary asked, “Fish harvests are down all over the world. The drought is pretty much worldwide and food production is way down. It’s really screwing up the US’s balance of payments. I can’t imagine what it would be like to have to buy diesel fuel from a service station. Can you believe over \$4 a gallon for gasoline?” [Palmdale, CA March 28, 2011, \$4.099 for 87 octane]

“I’m starting to get low on storage for that biodiesel, Gar-Bear,” Ron remarked, “Either we have to start using more or I’m going to have to stop picking up that used oil.”

“How much biodiesel do we have Chief?” Gary asked.

“15,000 gallons and since we got those golf carts, about the only fuel we burn is when I make a run or we have to use the tractor,” Ron replied.

“And you put in 2 12,000-gallon tanks, is that right?” Gary asked.

“Right on partner,” Ron answered.

“Well then, we have room for 9,000 more gallons and that’s about 36 weeks production,” Gary calculated in his head. “We need some help anyway, I was thinking of maybe putting in one home and inviting Damon down here to work for us. We wouldn’t have to pay him much, just enough for smokes and the like plus enough to pay his child support. What do you think?”

“I think I’d rather have your other son down here,” Ron said, “He’s the more industrious

of the two isn't he?"

"That was the case, yes," Gary replied, "But since he took that job insulating buildings, he's been working about 60 hours a week. Now that he's used to hard work, I figured it was time to bring him down here and do some hard work for us. Let's face it, there are enough chores to keep one man busy full time."

"Do you have enough money to buy a home?" Ron asked.

"I have \$15,000, Ron," Gary answered, "That's at least ½ the cost of a good used home."

"Linda and I haven't been spending much money partner," Ron responded, "We could help you out on that home, I suppose, if you can pay us back within a reasonable time."

"It will probably take me the better part of 9 months to do that Ronald," Gary explained, "Are you sure you want to do that?"

"I'm sure Gar-Bear. Clarence, how close are you to buying a home for your sister?" Ron asked.

"I figure I have about a 20% down payment on a home as long as I don't have to go over \$30 thousand Ron," Clarence said.

"How much do you figure you could pay me back in the same 9 months?" Ron asked.

"About \$3,000 give or take," Clarence answered.

"That would give you \$9,000 down and only a little over \$20 grand to carry," Ron said. "I'll go the \$3 grand if you want it."

"You know Ron, my sister will be paying the payment on that house, so I reckon that I could maybe pay you back \$6,000 in 9 months," Clarence said after rethinking Ron's offer.

"Well then, I'll loan you \$6,000 and you'll have \$12 thousand down on a \$30,000 home," Ron responded. "That will just make her payments smaller."

"I'll take the loan Ron," Gary said.

"Me too," Clarence added.

"Lyn went to town the other day and we set the acreage up as a corporation," Ron advised. "We're going to give everyone a 99 year lease on their lots for the magnificent sum of \$1, just to keep it legal. She's got the lawyer looking into every possible tax dodge he can come up with to avoid taxes."

“That takes care of the taxes, my friend,” Gary joked, “But can that lawyer get us an extension on life, too?”

“All of this hard work we’ve been doing is probably doing that for you Gar-Bear,” Ron laughed. “Aside from being exhausted, how are you feeling?”

“Pretty good now that you mention it,” Gary said, “I’m looking forward to my next lab workup.”

“How are you getting lab workups?” Clarence asked, “You don’t see a doctor anymore.”

“Dr. J writes it up as an Rx and I just take it to the lab,” Gary explained. “They send him the results and he faxes a copy to me together with any instructions. If he needs to change any of my meds, he calls it in to the pharmacy and sends me a one year Rx for the new pills.”

“It sort of made sense for you to go to LA for a doctor Gary,” Ron said, “But isn’t living in eastern Arizona and having a doctor in LA carrying it to the extreme?”

“Except for the dentist, I still use exactly the same doctors,” Gary said. “My cardiologist has me referred to the cardiologist you use for the treadmill once a year so I never saw any real reason to change. Besides, Dr. J is a soft touch on the Xanax and his partner is a soft touch on the Vicodin.”

“How much of that stuff do you have stored up?” Ron asked. “Or, don’t I want to know?”

“It’s no secret Ronald, I have 10 bottles of Vicodin and one very large bottle of Xanax,” Gary said. “That’s 1,000 Vicodin ES tablets and about 2,000 Xanax tablets. I’m going to keep getting the Xanax, but that’s probably enough Vicodin. What I’d really like to get is a better selection of antibiotics, but they’re so darned expensive.”

“Selection?” Ron asked.

“Well yeah, I have 500 capsules of the 500mg Keflex caps,” Gary said, “But I’d like to have some Cipro and some Tetracycline, too. If Dr. J wasn’t so hardnosed about it, I’d go for some morphine, too, but I consider myself lucky just to have 2 20-cc bottles of the Lidocaine Injection BP With Preservative 2% for suturing and the like.”

“What else do you have in those medical supplies of yours?” Ron asked.

“Well, seeing how you and Clarence both have bad hearts,” Gary replied, “I have a Banyan 900 Stat Kit.”

“What’s in that kit?” Clarence asked.

"Everything you'd need in the case of a medical emergency in a doctor or dentists office," Gary replied. "It came with a video and I watched the video. What I learned was that I don't know enough about all of those drugs and things to be able to use them. So, if one of you has a heart attack, you'd better darn well hope I can get a doctor on the phone that can tell me what to do with the stuff. Besides, I also have a case each of 1-liter bags of D5W, Normal Saline and Lactated Ringer's Solution plus the IV admin kits."

"Do you know how to establish an IV?" Clarence asked.

"Not really, pal," Gary admitted, "But I figure I can start one in the back of your hand and then the paramedics can do it right when they get here. The main thing is having the drugs and enough of your medical histories to share with the doctor on the phone. He can make the decisions. Which reminds me, we need for everyone to fill out a questionnaire of some kind that gives their height, weight, a brief medical history and all of the drugs they're on. That way if we do need to call a doctor in an emergency, we'll have the facts and not be guessing."

"Yeah, well what are you going to do if someone gets shot and needs emergency surgery?" Ron asked.

"You ever hear the old joke about the guy who got bit on the butt by a rattlesnake?" Gary asked.

"Yeah, what about it?" Ron said.

"The only thing that counts is the punch line, pal," Gary laughed. "The doctor said you gonna die."

"Getting back to your earlier question, why don't you see if you can sell 12,000-gallons of that biodiesel to a petroleum company. They can use it for a 20% blend with diesel. I'll bet you could sell 12,000-gallons at \$3 a gallon at the drop of a hat. And if a petroleum company doesn't want it, I'll bet there's a bunch of people who would want diesel for \$3 a gallon. That way, you wouldn't have to put in another fuel tank and you go a long way towards recovering some of your investment."

Now, that idea purely appealed to Ronald. Linda and he weren't being fairly compensated by the electrical utility in his opinion, but he was recovering the cost of the wind turbine. Considering how high they'd raised utility rates, they were pretty well off on the acreage. They had water, electricity, food running out their ears almost and were actually recovering their investment, albeit slowly. If he could sell \$36,000 worth of biodiesel, he'd have a \$27,000 profit and the wind turbine would be reimbursed as well as the biodiesel processor and part of the cost of the tanks.

Gary got on the phone and talked to Derek. He told Derek how things were going and asked if Derek would be interested in moving to Arizona. Derek said maybe someday soon, but not at the moment. Derek also gave him Damon's cell phone number and

Gary managed to track Damon down. Damon was in Mason City shackled up with his latest girlfriend. They talked for quite a while and Gary finally broached the subject of Damon moving to Arizona. After he'd explained the proposition to Damon, his son said he might be interested if he could bring his girlfriend along. Gary told Damon that he didn't care one way or another about the girlfriend, but if things didn't work out between Damon and her, it would be up to Damon to get her back to Mason City. Gary had already gone through one of Damon's true love adventures and wasn't about to put up with another. Damon said it seemed reasonable to him, but he'd need a couple of weeks to give notice and to arrange to move their things. Gary pointed out that Damon would have to settle for a used doublewide; there was no way he could afford to buy a new one for him.

Wednesday 20Sep06...

During the two week period that had passed since Gary had talked to Damon both Gary and Clarence had found used doublewides. One of them was just like new and went for \$30,000. The other 'needed a lot of work' and Gary got it for \$25,000. The only thing wrong with the house was that the walls had been beat to hell and it needed new carpet. After it was moved and set up, Gary bought the new paneling and the three of them worked for several days repairing the walls. Then Gary called a flooring company and had a serviceable new indoor/outdoor carpet installed. His total investment in the doublewide was \$28,000, but it looked like a new home. When they finished, Clarence and Lucy left to drive back to Palmdale and help his sister move.

Damon pulled in around 3pm. From the size of the U-Haul truck he'd rented, it was obvious that his girlfriend and he didn't have a lot of possessions. Damon and the girlfriend made short work of unloading the truck and Ron followed Damon to Gallup where he had arranged to turn the truck in. They were back in 3 hours and Damon brought the girlfriend over and introduced her. Gary didn't catch the name and he was too embarrassed to ask. From now on, her name was going to be 'girlfriend' until people started speaking up so Gary could hear.

All About the Weather – Chapter 6 – New Folks

Gary hadn't seen Clarence's sister since Fred had died. Everyone pitched in and they had the U-Haul trailer unloaded in no time. She didn't have a lot of possessions either or else Clarence had done a pretty good job of packing her things into the trailer. Before they were done unloading, Gary had concluded that his friend Clarence was a genius when it came to packing trailers. Clarence left to take the trailer to Gallup and Gary volunteered to go along and keep him company.

"Man you wouldn't know Palmdale if you saw it," Clarence said, "They imposed water rationing and everybody's lawn died. I heard that they were having trouble getting water for the fruit trees around Littlerock, too."

"What are the fuel prices like in California, Clarence?" Gary inquired.

"About what you'd expect, \$5.049 a gallon for unleaded," Clarence reported. "I'm purely glad I thought to stick in some of those 5-gallon cans of the biodiesel. I barely made it back towing this trailer with all of her stuff."

"Did you take all 10 cans?" Gary asked.

"Yeah, Gary," Clarence responded, "I knowed it was going to be uphill all of the way back. When did your boy get here?"

"He came blowing in on the 20th," Gary replied, "I'd have introduced you to his girlfriend, but nobody's said her name loud enough for me to hear, so I don't know what her name is. So it's dry in California, huh?"

"Dry enough they don't have no water to grow alfalfa or onions," Clarence answered.

"I see that the price of crude slipped up to \$127 a barrel," Gary shared, "So I expect the price of gas will be going up again."

"We may be a little better off now that the President has ordered our people out of Afghanistan and Iraq," Clarence observed.

"I didn't know that Clarence, when did you get that news?" Gary asked.

"Heard it on the radio this morning Gary," Clarence responded.

"I guess that means we won the war on terror, buddy," Gary laughed. "What else did you hear on the news?"

"There is one hell of a typhoon building up in the Pacific," Clarence reported. "Some folks are speculating it could hit Taiwan."

“That could mean trouble for them depending on the direction of the storm surge Clarence,” Gary commented, “Eastern Taiwan is mountainous, but western Taiwan is pretty much a plain. I’ll see what I can find out on the net when we get home. I’ll be darned; the war on terror is over. I wonder who won?”

“I can tell you who lost,” Clarence said, “The Taliban and the people of Iraq.”

“We have a final death toll?” Gary asked.

“I didn’t get that Gary, but close to 5,000 I expect,” Clarence responded shaking his head.

“If that typhoon hits Taiwan Clarence, it will just lend more credence to the scenario those guys painted for an abrupt climate change,” Gary was thinking out loud. “I’m glad that your sister is here. Now, Sharon and I have to see what we can do to get Derek, Amy and Lorrie here. Once I get Ron paid back, I may just use those two houses as collateral and buy three more used doublewides.”

After they returned to the acreage, Gary got on his computer and began to follow the typhoon. Taiwan lies between 120 and 122 degrees east longitude and between 22 and 25 degrees north latitude, or directly north of the Philippine island of Luzon. The typhoon, which appeared to be headed straight for southern China, suddenly turned north, right into the straits of Taiwan. The eastern edge of the storm looked like it would strike the western half of the island of Taiwan. Gary got some dinner and returned to the computer. The typhoon had rapidly advanced northward and had hit Taiwan. CNN would probably be full of news of the disaster the following day.

The real problem with an abrupt climate change was that the planet might find itself in a situation where it could no longer support the present population with food, water and the other necessities of life. Governments tended to bury their heads in the sand until it became too late for them to properly react to the situation; at least if past emergencies were anything one could gauge the situation by. The authors had proposed two possible outcomes between Canada and the US, either they would join together to fight the situation as a single entity, or, given the political climate, more probably close their borders to each other completely. The authors had also suggested that the US would likely abrogate the 1944 Treaty with Mexico and cut off the water supply from the Colorado River.

Anyone who had been following the situation of the water flow from the Colorado River from as far back as 2004 probably already knew that the river was in danger of drying up. It wouldn’t be an intentional act of the US, necessarily, to cut off the Colorado River flow. But, would Mexico understand and believe that? Moreover, Gary couldn’t read anything in the news that explained the President’s apparently abrupt decision to pull US troops out of Afghanistan and Iraq. From what Gary could see the faltering economy was as responsible for the troop pullout as anything else. With fuel prices continuing to skyrocket and faltering tax receipts, Gary suspected that Congressional leaders had

turned the screws on the President and told him to pull US forces out before they cut off the money and he was forced to pull them out using the already stretched budgets to pay for the transportation costs. But, that was just a guess.

01Oct06...

CNN was full of news of the damage to Taiwan and later China. Gary had switched to the International edition because it focused more on events outside the US. Of course France's response to the announced US pullout was big news in the International edition. It was actually surprising that President Kerry had waited as long as he had to pull the remaining troops out. Sorry about that, I did forget to mention who won the November 2004 election, didn't I? Well, you see, it happened like this. After the Democratic Convention, Kerry didn't get the expected bump in popularity that usually followed the Convention. But then again, everyone knew months before the Convention that Kerry had the nomination sewed up.

Adding Edwards certainly hadn't hurt Kerry, either. Maybe it didn't help much, but it didn't hurt. Then the economy went into the toilet and the markets began to drop in the face of rising oil prices and extremely poor gains in net jobs. Dubya had been forced to hang in with the negative ads campaign and apparently that had turned off a lot of Americans. The election had been pretty close, but by the time the final ballot was counted under the watchful eyes of those International observers, Kerry had won by the narrowest of margins. And although Florida had experienced its share of problems with those voting machines, there turned out to be nothing that Bush could take to the US Supreme Court.

Kerry found himself with a Republican Congress however, and despite his campaign rhetoric, was forced to pursue the war in Afghanistan and Iraq. One thing Kerry had been able to accomplish was to gradually reduce the American presence in Iraq to less than 100,000. And fortunately, the Republicans looked like they might be able to hold on to their slim Congressional majority, but until the Tuesday after the first Monday in November, no one would know for certain.

"Super-typhoon" is a term utilized by the US Joint Typhoon Warning Center for typhoons that reach maximum sustained 1-minute surface winds of at least 65 m/s (130 kt, 150 mph). This is the equivalent of a strong Saffir-Simpson category 4 or a category 5 hurricane in the Atlantic basin or a category 5 severe tropical cyclone in the Australian basin. The Bathurst Bay Hurricane produced a 13 m (about 42 ft) surge in Bathurst Bay, Australia in 1899. The typhoon that struck Taiwan was a category 5 and its storm surge set a new record of 16 m. Gary found a website where he could track typhoons in the western Pacific and already had one where he could track hurricanes in the Atlantic if he wanted.

News out of Taiwan was sketchy and delayed, but early estimates hinted at a high death toll and injuries in the thousands, perhaps hundreds of thousands if not millions. Gary began to wonder if that scenario they had all relied on weren't off by a few years. It

was, after all, just a prediction of what things might be like IF there was an abrupt climate change. Spurred, perhaps by the Discovery Channel report and the National Geographic Channel report, the media had reported briefly on the rising ocean and reduced salinity in the Atlantic, but then something more important came along and they'd moved on. The typhoon hitting Taiwan however was big news, probably because of so many dead and injured.

o

Aside from the Far East, perhaps the greatest impact of that typhoon was right there on the acreage. Gary started searching the net for any information concerning the conditions of the oceans. NOAA was a goldmine of information provided you could interpret what was posted on the website. But perhaps the website distinguished itself with what it wasn't reporting, like in-depth information about the changes occurring in the Atlantic. Even CNN had more information on that when they thought to cover the issue. What CNN was full of, beside crap, was speculation about what had caused President Kerry to call for such an abrupt recall of our troops from Afghanistan and Iraq. While the liberal press hailed the move, a discussion was beginning to appear that questioned his motives. That speculation ran from a Congressional threat, to keeping a campaign promise, to veiled speculation that something was going on that required the presence of the troops at home. Fortunately, or unfortunately depending upon one's viewpoint, there was no shortage of speculation.

Ronald had decided that this was as good a time as any to see what he could do with his surplus of biodiesel. He went to talk to the contractor that they'd hired to put in the basements to see if he knew anyone who might be in the market for some biodiesel at a below market price. The contractor, tired of paying well over \$4 a gallon for #2 diesel fuel told Ron he needn't look any further; he would buy all they could spare and he was willing to take delivery now and come spring, his needs would be higher, provided they had the fuel to spare. On a hunch, Ron offered the biodiesel at \$3.75 a gallon and the contractor was more than willing to pay the price. He assured Ron that he would take all the biodiesel Ron could deliver at \$0.75 a gallon below market price. Somewhat encouraged by this turn of events, Ron increased the radius of his pickups and landed another 150 gallons of used vegetable oil per week. This forced him to change his pickup schedule to two days a week, Mondays in the east and Tuesdays in the west.

"Gar-Bear, I found someone to buy that biodiesel," Ron commented, "But it has sort of created a problem."

"What's that partner?" Gary asked.

"The short version is that we need more biodiesel processing equipment and someone to operate it full time," Ron explained. "That contractor who put in the basements will buy all we will sell for \$0.75 below market and I just landed another 150-gallons a week in raw materials. How about you give Derek a call and offer him a full time job with housing?"

“Ron, that could create a problem, assuming he were willing to come,” Gary pointed out. “We’re not paying Damon all that much and if the two of them get together and start comparing notes, all hell will break loose.”

“For the amount of money we can make off this biodiesel operation, I think we can afford to pay them both the same Gar-Bear,” Ron chuckled, “How does \$8 an hour sound plus the free housing.”

“Ok, I guess, partner,” Gary admitted, “But I’m still paying off that loan on Damon’s house.”

“The corporation will charge off the balance you owe to salary expense and reimburse you for what you put out on that house,” Ron suggested. “Of course the corporation will take title to the house. And, if you look around and find another bargain like that first one, the corporation will buy a home for Derek and Mary to move into. And, come to think of it, didn’t you tell me that Mary drove a semi?”

“Well yeah, but what do we need a semi for?” Gary wanted to know.

“We don’t need a semi, partner, but it means she could drive a delivery truck and pick up the used oil two days a week,” Ron explained. “And maybe even deliver the finished goods to that contractor.”

Gary got on the phone to Derek and laid the whole thing out. \$8 an hour plus free housing and that meant no utility bills except for the phone. Mary would also have a part time job working a minimum of 2 days a week for the same \$8 an hour. Derek admitted that his job hadn’t been the same since he’d gotten back from Kosovo 2 years earlier and that he was looking to make a change. With any kind of luck, they could sell the house in Huxley and clear enough to pay off the 1st and 2nd. He would talk it over with Mary and get back to Gary, he said.

The next morning Gary filled Ron in on his conversation with Derek. Ron informed Gary he was ordering the second processing unit and that Gary had better start looking for a used doublewide. He also handed Gary a check that covered Gary’s full investment in the home that Damon and the girlfriend were living in. Damon’s wage would be increased to \$8 an hour when Derek and Mary showed up. Since they were providing Damon with food, Ron said, it would about even out since Damon would have to pay for food from now on.

All About the Weather – Chapter 7 – Number 2 Son

Derek happened to call back about 2 weeks later, the same day that the new processing equipment arrived by truck. Mary and he had talked it over and had even talked to a realtor. It looked like they could get enough out of the house to pay the real estate commission and both loans so they were willing to come to Arizona. But, Derek told his Dad, it wouldn't happen until semester break. They needed time to sell the house and get everything squared away back in Iowa. Gary told Derek that he was looking forward to them being there and he'd pass the news along to Ronald.

Ron was happy to hear that Derek and Mary were coming, but less than thrilled that it would be so long. He got Derek's address from Gary, in passing, and suggested that the two of them take the time to get that new processor mounted. Damon and Clarence could help, he said, and they'd have it up and operating in hours. Ronald had an idea, but he had to talk it over with Linda and he wasn't about to share it with Gary. In California, and perhaps many other parts of the country, employers occasionally bought an employee's home if the employee were transferred and couldn't sell his or her home. Was that a perk or a bene?

With Linda's approval, Ron contacted the realtor in Iowa who had listed the home at NNN Parkridge Street in Huxley, Iowa and offered the asking price. Derek and Mary accepted the offer and Ron had the realtor immediately re-list the home for sale. The realtor was instructed to provide Ron with a final figure on the transaction and the bank routing numbers so he could directly transfer the funds to the escrow company. The realtor explained to Ronald that they did things a little differently back in Iowa and gave Ron his trust account routing information. He'd let Ron know what the final figures were as soon as he worked them out.

Gary and Sharon found a used doublewide that needed work, but not nearly as much as had the home they'd bought and fixed up for Damon. This home could get by with new flooring and appliances, the same as Damon's but didn't need half the walls replaced. Gary told Ron about the house and Ron took the checkbook and Gary and he headed to Winslow where the trailer was located. Ron looked the unit over and agreed that it was worth the \$27,500 asking price and wrote the dealer a check. The price included delivery and setup. Ron and Linda had the money to spare for a brief period and once Ron began to deliver the biodiesel, it looked like the company would be in outstanding financial condition. He still had to turn over Derek's house, but if he lost any money on that deal, he would write it off as a business expense.

o

Thanksgiving, 23Nov06...

With Derek and Mary now moved and working, there was great cause for thanks giving this year. In fact, with the 'refund' check that Ron had given them and the latest distribution from the trust fund, Gary and Sharon were considering moving Lorrie and Amy to

Arizona. Amy would graduate from Bakersfield in June and that would be soon enough, they hoped. Kerry had managed to have a majority of the troops' home for Thanksgiving, too. But it hadn't really helped the Democrats who were now being blamed for the state of the economy and the high gasoline prices. What it really boiled down to was that whoever was in power was responsible for the plight of the American public and it didn't really matter if they were a Republican or a Democrat.

Although Iraq accounted for only a couple of percent of the oil consumed in the US, when they totally cut off the US, the prices rose yet again. The national price for unleaded regular was now near \$5 a gallon. CNN, of course, was still blaming former President Bush for the problems even though he'd been out of office for nearly 2 years. The Republicans had actually gained a few seats in the House and Senate during the midterm elections and it didn't look like President Kerry was going to get too much of his proposed legislation passed during the next two years. It was simply politics as usual, but the Republicans were taking a beating in the liberal press and media.

Buoyed by finding a market for the excess biodiesel, Ron had expanded the area where he was getting used vegetable oil all the way from Grants, New Mexico to Flagstaff, Arizona. This looked like it would keep Mary on the road 4 days a week just picking up the used oil. Ron had gone ahead and sold 12,000-gallons of biodiesel to the contractor and he promised another 12,000-gallons in spring. The price was now up to \$4.25 a gallon. Derek and Mary's home had resold in the interim and it had only cost Ron and Linda a net \$1,000 in round numbers. However, Ron was beginning to get a little concerned over the used vegetable oil situation. John Kerry had advocated biodiesel in his 2004 campaign and it looked like Congress might actually do something about that particular item during 2007. That got Ron to do some of his own research on the net. He found interesting information at a couple of websites, where, after studying the information, he decided that they might be better off growing their own oil producing plants.

Those folks up in Iowa used corn and soybeans to produce biodiesel, but Ron noticed that canola beans produced about 3.5 times as much oil per acre as soybeans. Another article caught his eye, and it mentioned that, "castor oil is the best substance for producing biodiesel because it is the only one that is soluble in alcohol, and does not require heat and the consequent energy requirement of other vegetable oils in transforming them into fuel." Now Ron liked that, he was having a problem disposing of the glycerin byproduct anyway, I mean how much soap could you make? The article went on to say, "The castor-oil plant is easy to grow and is resistant to drought, which makes it an ideal crop for the extensive semi-arid region of northeast Brazil." That sort of sounded like eastern Arizona to Ronald.

The only real problems Ron found with using the castor bean plants were that if the ground froze in the winter, they'd have to replant in the spring, that the plants themselves were poisonous, as in Ricin poisonous and it was a little difficult to harvest the castor beans. But, they weren't terrorists and they could probably find some way to capture the energy the dead plants represented if they really thought about it. Maybe they could put in a steam plant or something to heat the outbuildings by burning those plants.

Further research revealed that the Brigham variety developed in Texas only had 10% as much ricin as other varieties.

And the yields would be pretty good too. A section of land would yield $640 \times 151 \times .8 = 77,312$ gallons of biodiesel. Ron did some more calculating and decided that 2 sections of land, properly apportioned between corn to produce alcohol and castor bean to produce oil would get them to the 120,000-gallons per year production level. And, if they stored the beans and just extracted the oil, as they needed it, they wouldn't have to worry too much about storage. It would mean producing a little under 500-gallons of biodiesel a day (461), 5 days per week, but that was well within the capacity of their two processors if they did 3 batches per day. Now the land was another matter and in that, Ron got lucky. The section their 20-acre plot was cut out of was for sale, as was an adjoining section. And, the buyer agreed to sell the land on a 4-year land sale contract. The production of the 1,260 additional acres (\$400 per acre) would pay for itself in a single year, all other things being equal. ($120,000 \times \$4.25 = \$510,000$ v. $1,260 \times \$400 = \$504,000$)

Ron then tried to find out about processes for extracting the oil from the plants. There seemed to be 2 primary methods, solvent extraction and extrusion or squeezing the oil out of the plant parts. While the solvent extraction was far more efficient, it was much more costly than the extrusion method, both in terms of equipment investment and processing. One website contained an article that fully described the preferred 2-stage extraction process. Obviously this wasn't as simple as Ron first thought, but maybe he could scrounge around on the net and find a used, small-scale extraction plant that someone had invested in and gone broke using. If he could, maybe he could get it for a song (or two). Eventually, he did just that; he found a used small-scale plant for sale. It was a lot more than he wanted to spend, but a second year of production would pay for the plant and then some.

"Well sir," Ron was talking to Gary, "I got the two sections of land bought on a contract and I got that used extraction plant setup and ready to go. I wonder what else I'm going to have to buy before I can get this project off the ground completely?"

"I'd just guess Ronald," Gary laughed, "That you need another tractor to plant the seed, a corn planter, something to plant the castor seeds, a corn picker, wagons plus somewhere to store the corn and castor beans until you can process them. But, I'm just guessing, you understand. Plus, we're going to need some hired hands to farm 2 sections of land."

"Why didn't you say something earlier before I got into this thing past the point of no return?" Ron asked.

"I don't know," Gary said, "Why didn't you ask my opinion before you went off the deep end partner? Now, if you plant soybeans instead of castor beans, I expect that Clarence and my two boys and I could probably handle a lot of the farm work. Of course, that will cut your yield by two thirds, but we can use the soybean meal to feed cattle or simply

sell the soybean meal. It's worth about \$290 a ton, you know due to the shortage of livestock feed."

"That beats the hell out of a sharp stick in the eye, partner and I expect the price of that meal stuff will probably just keep going up," Ron speculated.

"There was a time, back in 1968 when it went for about \$400 a ton," Gary commented, "So I say that you have a safe bet there. Besides we can get by with less equipment if we go to soybeans. We can use a self-propelled combine to pick the corn and harvest the soybeans. We'll need a drill to plant the beans and a planter to put in the corn, but we can use the same cultivator. We can probably put in a corncrib and store the soybeans in the overhead. That will eliminate having two buildings to store our production. But, that's going to be one mother of a corncrib. And, we're going to have to make sure we get good circulation so the corn and beans don't spoil."

"Now," Gary continued, "You can figure on maybe 50 bushels per acre on the soybeans if we properly fertilize and have enough water. The corn will go between 125 and 175 bushels per acre given the same constraints. A bushel of corn will produce about 2.5 gallons of alcohol. I expect a bushel of soybeans will produce 11 pounds of oil; that's just a little over a gallon. Now figure roughly 1-gallon of alcohol to 10-gallons of soybean oil. You're going to need about 25 bushels of soybeans per bushel of corn. In English, that means that at 50 bushels per acre of soybeans, you will have to plant 62.5 acres of soybeans per acre of corn. If you divide the 1,260 acres by 63.5, you get almost 20 units. So, partner, you're going to plant 20 acres of corn and 1,240 acres of soybeans. How do you like them apples?"

"Well, that means that we'll end up with about 47,600 gallons of biodiesel a year," Ron announced. "How much soybean meal are we going to end up with?"

"Figure 60 pounds a bushel and 80% of that to be soybean meal," Gary replied. "So if you get 50 bushels per acre that means you'd have $60 \times 50 \times 1,240 \times .8$ divided by 2,000 equals 1,488 tons of meal at \$290 a ton or about \$431,520. Now add that to the value of the biodiesel, $47,600 \times 4.25 = \$202,300$ and your total gross off those two sections is \$633,820."

"Hell, that's better than I would have gotten growing castor plants," Ron grinned.

"Ron, this all assumes you get 50 bushels per acre and the only place they get those kinds of yields is in Iowa," Gary laughed. "Still, you're going to gross at least a half million a year off those two sections. Now net is another thing entirely. But with the prices of fuel and meal so high, you ought to make out pretty darned good."

"I love it Gar-Bear," Ron joined in the laughter, "Getting rich and helping out the environment at the same time."

"Just don't lose sight of what brought us to Arizona in the first place Ronald," Gary cau-

tioned. "I don't know how many good years of production we'll have with this possible abrupt climate change. And although I said possible, I am beginning to believe probable. This biodiesel thing is just part of the picture here, partner. We could end up with horses and buggies before this whole thing ends."

Clarence entered the room just in time to hear Gary say horse and buggies. He gave Gary sort of a strange look and said, "Just because you got those cowboy guns and cowboy hat don't mean you need to go riding no horses, Gary."

When finally the laughter died down, Gary told Clarence to go get another slice of pumpkin pie and forget he'd heard that. Having some horses wasn't all that bad of an idea Gary thought. When he'd been a little boy of about 5, his grandfather had sold his two Belgian Draft horses to the Amish. Maybe they should see about buying into some of those draft horses if the climate got any worse. If the climate did the flip-flop like those guys projected, it could theoretically get to the point where they couldn't grow soybeans and produce biodiesel anymore. It might even get to the stage where it became hard for them just to grow food. Maybe they'd better look into what crops grew in the northern US.

o

Here it was the day after Thanksgiving and they never had found the time to go fishing. For that matter, they hadn't even found the time to get out to that 300-yard range that Clarence had built. But they'd been pretty damned busy and they were short handed, forcing them to do a lot of the work themselves. It was past due time to move Lorrie and David and those 4 teenage boys of his to Arizona. And, come spring, when Amy graduated from college, they were going to move her to Arizona too.

That would take care of the Olsen's, but when were Ron and Linda going to start gathering in the Green's? Just as soon as he had that land and equipment paid for was the answer to that question. By the fall of 2008, they would have two crops in and one sold. By the spring of 2009, that second crop would be converted and sold and Ron and Linda would be able to put in the four doublewides and move their kids. In the meantime, Gary, Ron and Clarence were going to ride the tractors and Damon, Derek, Mary and the girlfriend were going to do the heavy work. Ron figured to keep Mary chasing after the used vegetable oils until their supplies got cutoff. They could work extra hours and process the soybean oil when there wasn't enough used vegetable oil to process.

All About the Weather – Chapter 8 – Home, Home On My Tractor

Ronald, being the environmentally conscious individual that he was (do you really go to hell for lying?) had found a used aboveground swimming pool and used it to store the glycerin byproducts from the biodiesel production. But, that pool was filling up. He went looking on the net to see what he could do with the glycerin. He found one website that talked about composting and another that described it has a hazardous waste subject to control by OSHA. One thing people agreed on was that the stuff was flammable. So, Ron took a five-gallon pail of the stuff and set it on fire. It gave off a dense smoke, but as long as you weren't down wind, it didn't seem to be a problem.

That swimming pool was set up quite a ways to the south east of the homes and one day Ron just happened to drop a burning road flare into the pool. The fire department didn't show up so Ron figured that he'd solved the problem for the moment. However, it would be right back the next day when they processed more of the used oil into bio-diesel. The problem clearly wasn't solved by any means. On the other hand one website clearly stated that glycerin was not considered a hazardous waste. Ronald bought an old beat up 1½-ton truck (diesel) and mounted a tank on the bed. Every day, the glycerin was added to the tank and when the tank was full, he drove it to the county landfill and emptied the tank. Problem solved, at least for now.

23Mar07...

It was Gary's 64th birthday; one more year and he'd be a senior citizen in even the most conservative restaurants, not that they ate out much. Derek had postponed celebrating his birthday so the two of them could celebrate together. Derek was now 32. He was showing off his birthday present to everyone who would look. Mary had finally broken down and bought Derek an M1A from Springfield Armory, specifically, the SA9805 Super Match, McMillan Marine Corps camo fiberglass, Douglas stainless steel barrel just like the ones Gary and Ron had. Well, almost like the ones that Gary and Ron had; it was short one accessory. Gary told Derek that if he loaned him the rifle for a few days, he would have an accessory installed on the rifle so that it was the same as Ron's and his. Now Derek didn't know about the Surefire Suppressors.

Derek hadn't seen the suppressors because the fellas had the Quick Detach mounts and the suppressors were safely tucked away in those little bags that Sharon had made. But Derek had the Harris bipod and a nice scope on his rifle and all it needed was an accessory. Obviously, Derek needed the suppressor to improve his accuracy. Just as obviously, Derek needed to round out his arsenal, but Gary and Sharon couldn't help with that until they had the two doublewides installed and paid for. Gary did drop a hint to Mary that the next time she bought Derek a gun, she should get with him first and they could save one trip to the gun store.

"CNN has learned of a minor slowing of the Gulf Steam," Wolf Blitzer announced. "While the slowing borders on the imperceptible, some scientists are warning that this could be the beginning of a cooling trend. A continued slowing of the Atlantic thermohaline could

eventually result in a decrease in temperatures in Europe. The Discovery Channel and the National Geographic Channel have previously shown specials on this very subject, but the majority of earth scientists doubt that such an event is possible. You may recall the motion picture, 'The Day After Tomorrow,' that was released in 2004. That film depicted a situation where the abrupt climate change occurred virtually overnight. CNN has invited noted author Kevin E. Trenberth who wrote 'Global Warming: It's Happening' to comment on this phenomenon."

Gary turned the TV off, he'd heard enough experts on the subject of Global Warming to last him a lifetime. Recently, he'd found interesting articles at two websites, that supported the hypothesis the three of them were operating under. He looked at his discovery as sort of a mixed blessing. It was good to know that they had been right to begin preparations, but it was bad if it really happened. And, how well prepared were they really and was this something that a person could really totally prepare for? That depended upon how the world's population and governments reacted to the event if and when it happened and how severe the event became. The goal for the acreage and its residents was to have a 10-year supply of everything and the ability to go on no matter what. Which reminded him, he really should look into getting some riding horses and draft horses one of these days.

The first of April brought another deposit from the trust fund, permitting Gary and Sharon to buy a used doublewide for Lorrie and David. The boys would just have to switch to bunk beds if they didn't already have them because the doublewide was going to be tight for the 7 of them. The timing was about right, too. Lorrie and David were just beyond the 3-year prepayment penalty period on their home loan and after a lot of discussion Sharon was at least able to get Lorrie to think about it. The problem was that two of the boys were out of high school and try as they might, could not find jobs in either Palmdale or LA. Sharon assured Lorrie that both boys would have \$8 per hour jobs and that the family would live rent and utility free in the home. David would have full time work at the same \$8 per hour; that was just the standard wage at the acreage.

Sunday, 08Apr07...

"David wants to know if he can run a locksmith business on the side." Lorrie asked Sharon.

"Gary, Lorrie wants to know if David can run a locksmith business on the side." Sharon forwarded the question.

"I don't see why not, babe, there's going to be a lot of time when we don't have much to do," Gary replied.

"Yes," Sharon said to Lorrie.

"Well, in that case, we're going to drive over there to Arizona and look at this acreage," Lorrie replied.

“When are you coming?” Sharon asked.

“How about next weekend, Mom, we got our tax return (refund?) and we’ll have the money,” Lorrie replied.

“Do you know how to get here?” Sharon asked.

“No, why don’t you meet us in Holbrook and lead us to the acreage,” Lorrie suggested.

“Ok honey, call us when you get to Holbrook,” Sharon said. ‘See you next week.’”

“It’s a long way to Holbrook Sharon,” Gary pointed out.

“I know, but if they can get to Holbrook, I’ll drive over and lead them back here,” Sharon replied.

It’s about 525 miles from Palmdale to Holbrook. MapQuest says you can make the drive in 8 hours. Of course that’s if you average 65 miles per hour. Now I ask you did you ever travel 525 miles in a vehicle containing 7 people without making a few stops? There’s gas to buy, bladders to empty, sodas and food to buy... Lorrie and David left Palmdale around 5am and arrived in Holbrook around 5pm on Saturday 14Apr07. Of course Arizona didn’t observe daylight savings time so it was a 12-hour trip. That was an average speed of about 44 miles per hour.

After dinner, Gary and Sharon took Lorrie, David and the 4 teenagers to see the house. The boys were enchanted because with that full basement, they could throw up some partitions and each have their own bedroom. “Oops,” Gary thought, “Why didn’t I think of that?” As it turned out, the boys’ idea was the selling point. Gary explained that the jobs basically were driving tractors and the like and the David could choose how he wanted to work it. He could be an on-call mobile locksmith, or could take a job in the nearest town. However, considering the price of gas, Gary told David to give it a lot of thought. And that was another thing too, Gary pointed out. If David and Lorrie had a diesel-powered vehicle, the residents got the biodiesel for cost or 75 cents a gallon. Did I say the basement was the final selling point? It was, for the boys; David liked the idea of 75 cent a gallon fuel. With his odd hours in the San Fernando Valley, he couldn’t car pool and the commutes were killing him financially.

The carpet in Lorrie and David’s trailer had to get by with a shampoo. They had been converting all of the appliances to propane or electric as they went along and that generally meant the furnace, the hot water heater, the clothes dryer and the dishwasher. If Lorrie and David really wanted new carpet, they would have to buy it themselves.

When it was all said and done, Gary and Sharon had about $\frac{1}{3}$ of the price of the home for Amy, Udell Jr. and Audrey. They kept their eyes open and when a good used doublewide came on the market they put \$9,000 down, had the trailer installed and re-

placed the appliances. Now, all they had to do was convince Amy that she would be better off in Arizona than in California. The sting of the divorce had worn off completely, but the kids' father was still in Palmdale, behind on his child support and spending what money he did have on booze and drugs. Amy proved to be easier to convince than they thought.

It pretty much took the last of their cash to outfit the last trailer with new appliances. But, with the little they could save and 3 distributions from the trust (avg. \$5,000/quarter) Gary and Sharon figured they be pretty close to having the trailer paid off. Make that 4 quarters and it would be paid off for sure. But, they weren't really thinking clearly. All four of David's sons and David worked for the corporation now. Ron asked Gary how much they had in the home, including the appliances, and cut them a check. Gary and Sharon, in turn, paid off the balance on Amy's home and socked away the remainder for a rainy day, no pun intended.

o

Amy had ended up majoring in Criminal Justice with minor in Business Administration. Now, it should be made known that Amy was not exactly police officer material. And, she was broke and had been barely making it for a long time. It became obvious rather quickly that Gary and Sharon were going to have to foot the bill for the move. But wait, Amy had a lot of furniture. It took a 24-foot U-Haul truck to haul her household goods to the acreage west of Holbrook. Clarence should have been the one to go to California and help her load. But, Gary and Sharon persuaded David's two oldest boys to do the deed. They'd pay the boys the same \$8 per hour that they were earning on the acreage.

As it happened, they were between planting and cultivating, so the timing of the boy's trip to Palmdale worked out fairly well. It had cost a fortune to buy gas for the U-Haul truck, but Gary and Sharon had sent along an envelope with more than enough cash in it to help with the trip. One of the boys drove the truck and the other David's new used diesel pickup. They had enough fuel for the return trip for the pickup, but gas for the truck and Amy's car really ate into that envelope of cash. As it happened, Amy and the kids made it out of Palmdale without Udell Sr. knowing about it. All future calls to Daddy Dearest would be made by cell phone. Udell knew that Gary and Sharon and friends had moved to Arizona, but he had no idea where to start looking; so much, the better, in Gary and Sharon's opinions. Until the man got clean and sober, he was better out of the kids' lives, in Gary's not so humble opinion.

They used a minimum till process to ready the fields. In general terms that meant that they scraped of the desert brush and disked the land. It was just enough to allow them to plant. Ron had been thinking ahead and had put in a pair of 6" well casings. As long as that aquifer held water, they'd be able to irrigate the two sections. The wells were very, very deep, ~1,900', but the head was only ~1,400' meaning they had ~500' of water, if I've done the math correctly. Because of the downward slope of the land toward the west, all they had to do was feed water to the east end and let gravity and ground saturation force the water along to the west end of the field. Use of irrigation pipe be-

yond that needed to get the water to the upper end of the slope was cost prohibitive. If Mother Nature and Sir Isaac Newton didn't help them out here, they were well and truly screwed. And, had they not thought to put in water channels every other row, the minimum till would have surely blocked the water flow.

By the time they were back from California and had Amy moved in, it was time for the boys to learn how to cultivate. Ron had acquired 2 used row crop diesel tractors with cultivators already mounted. The tractors needed work, but acquiring them as he did on relatively short notice, they just changed the oil, turned them up by pulling and soaking the injectors and used them 'as is'. By the time each boy had finished cultivating, it was almost time to do it again. Now Gar-Bear was watching the whole thing with amusement. The idea behind minimum till farming was to avoid cultivating. More than any other crop, soybeans depend on no-till to be an economical and environmentally sound crop. The limited residue left after soybean harvest, however, can lead to significant soil erosion unless both the soybean residue and residue from preceding crops remain undisturbed on the soil surface.

Like corn, the large soybean acreage in the US has led to the development and labeling of numerous herbicide programs for soybeans and assures that efforts will continue in the future. In fact, currently available no-till herbicide programs for soybeans offer a degree of efficacy, safety, and flexibility not available for any other crop. Use of no-till has allowed soybean production to move west of the crops traditional growing areas. (Like eastern Arizona)

When they'd finished cultivating for the first, and only as it turned out, time. Gary explained the concept of no till farming to Ron until he was certain that Ron understood. The 20 acres of corn would benefit from being plowed, disked and raked, Gary explained, but no or low till meant that you didn't work the ground. Ron started to protest and then remembered he'd forgotten to ask Gary what no till farming was all about. While he was at it Gary explained that they would need to plow 40 acres at the end of the season; the 20-acre cornfield and a new 20-acre field for next year's corn crop. That, he explained, was what was meant by the term crop rotation.

All About the Weather – Chapter 9 – Hard Lessons

Gary was letting Ronald learn all about farming the hard way. Aside from burning up some biodiesel, which they could spare, using the tractors to cultivate let them know what kind of condition the tractors were really in. They took the cultivator off one of the tractors and removed the loader and blade from the other. Now they had two tractors to pull wagons including one that could be used to plow, disk and drag. All they needed for equipment now was a plow, a couple of wagons and a grain elevator, all of which could wait until harvest time. Then, after the harvest was finished and the 40 acres plowed, they could get the tractors in and have them rebuilt.

“How come you didn’t tell me sooner that we didn’t need to cultivate the beans?” Ron asked.

“How come you didn’t ask?” Gary retorted. “I don’t know a lot about farming partner, but back in the late ‘50’s when I was in high school, trash farming was the rage among the FFA boys. That’s why I like the net so much Ron. If there’s something you don’t know you can find it on the net if you can figure out how to ask the question.”

“Is there anything else I need to know?” Ron asked.

“You know what we need for equipment, I mentioned that,” Gary replied. “But it has occurred to me a couple of times that we ought to have some horses on this farm of yours. I’d say we should get some big draft horses and enough saddle horses for everyone. And, seeing how we’re going produce so much soybean meal, I think maybe we ought to think about adding some breeding stock so we can continue to produce our own beef. We talked about chickens but never did anything about it. We can build a hen house over the winter and put in some chicks come spring. And if we’re going to get that heavily involved in livestock, we probably should get a boar and a couple of sows. Clarence would turn awfully unforgiving if we ever ran out of pork chops. We have lots of time to figure this stuff out, you know. But, if we don’t get started, it might turn out to be too late.”

“Linda and I were counting on this first crop and the one next year to get us healthy financially,” Ron remarked. “Then we’re planning on gathering in all of our kids and bring them there. That’s what those four basements are for, you’ll recall.”

“Sharon and I can see about buying some hogs and cattle,” Gary offered, “And Clarence can buy the chicks come spring. The horses are a different matter though. Good horses are expensive and we’ll have to save up for those.”

“How much of our equipment are we going to need to switch over if we end up farming with horses?” Ron asked.

“Not so much Ron,” Gary replied. “We can change out the tongues on the wagons. Since they will probably have flotation tires, two horses can pull one wagon. We’ll have

to come up with some way to drill those beans, though and that may mean making modifications to that equipment. You know, we ought to be checking around for antique, horse drawn farm machinery.”

“What’s the point of rebuilding those tractors if we’re going to end up using horses?” Ron wanted to know.

“Ronald, it might be our grandchildren using the horses, not us,” Gary laughed. “Somehow I just can’t picture either one of us using a walking plow or harvesting corn by hand like they used to.”

“So when you’re talking about being prepared,” Ron summarized, “You’re really thinking long-term aren’t you?”

“This whole adventure is a long-term project, my friend,” Gary reminded Ron. “According to that scenario that got this whole project started, things weren’t going to go to hell until after 2010. Now, I have a feeling that it might happen a couple of years sooner, but still, that puts us out until 2018 before things really get bad. Which reminds me, we need to stock up good on spare parts for our wind turbine and that diesel generator. We won’t need those things until we can’t get them, you know.”

“I’m beginning to believe that I’m going to need to invest in another biodiesel processor Gar-Bear,” Ron mentioned. “We’re processing one hell of a lot of used oil right now. We’re going to be short production capacity when that crop comes in.”

“Maybe you’d better plan on running 2 shifts, partner,” Gary suggested.

“I’d do that if we had someone to run a second shift,” Ron agreed.

“Why don’t you get Derek to train one of David’s boys to use the equipment?” Gary asked. “Running those processors isn’t rocket science. Then, when the crops come in, you can run 3 shifts a day with 3 processors and double your output.”

“I can do that easy enough,” Ron agreed. “At 8 hours a batch, that’s around 480 gallons a day. I’ve been meaning to ask you something for a long time. What’s bugging Damon?”

“Probably po’d because he can’t ride his Harley as much as he’d like,” Gary surmised.

“Why not?” Ron asked, “He has plenty of free time.”

“We never put in a supply of gasoline, partner,” Gary explained, “And that Harley of his sure doesn’t run on diesel.”

“All right,” Ron grumbled, “I get the point Gar-Bear. I’ll put in a tank for gasoline and fill it up. I guess there’s no getting away from having some gasoline is there?”

“I expect not,” Gary agreed.

o

The summer of 2007 passed quickly. The women had plenty of help canning because the only farm work they were doing was to cultivate the corn and feed the 2 remaining steers. They ran short of jars and lids again and Ron was forced to contact Ball directly. They gave him a good price, provided he bought a truckload of jars and lids. He went for the deal and had them send 12,000 lids to go with the 2,400 jars they agreed was a minimum order at that price. The biodiesel operation was running smoothly and Ron made a unilateral decision to sell off those 36,000-gallons of real diesel they had been storing. That gave him lots of storage space for the biodiesel. He also laid in a large supply of the components of formula #5, which seemed to stabilize the biodiesel just fine.

When they got another trust distribution, Gary and Sharon spent the entire amount on livestock. They bought 4 sows and a boar plus 4 Black Angus cows and a bull. Around this point in time, Ronald, who was a little better off financially from selling the 36,000 gallons of diesel, had a contractor come in and erect more out buildings. They put in a hen house, a hog house, a corncrib and a barn. The men talked it over and decided to cut the soybean production by 20 acres the following year so they could grow alfalfa on the 20 acres they were growing the corn on this year. They still didn't have any horses or horse drawn equipment, but Gary had spotted the equipment on the net and the next time he got a distribution from the trust, he intended to buy a riding horse drawn plow, mower, and what was called a cultivator.

The corncrib was completed just in time for the harvest. Ronald bought the remaining farm machinery they had put off until harvest time and they harvested the soybeans first, changed to the corn head and picked the corn. They were beginning to accumulate biodiesel from a summer long processing of the used vegetable oil, but Ron had sort of shot himself in the foot by selling off the 36,000-gallons of the old diesel fuel. At the moment, he didn't have any ready customers for the biodiesel they were producing. Nevertheless, even considering the cost of the farm buildings and extra equipment Ron and Linda were far from broke. They had enough cash left over to acquire 4 used doublewides and get them installed so that their kids would have a place to live when they were able to persuade them to move to the ranch.

When it had only been 20 acres, they just called the place the acreage. But now that Ron owned 2 full sections of ground, it was a ranch. Back in Iowa, it would have been called a farm and that was really what the place was, a large farm. But western custom dictated that they call the place a ranch. Ron named the ranch 'Los Tres Amigos', or something like that. Everyone just started calling the place LTA. The lawyer managed to qualify the corporation as an exempt electrical cooperative and that solved a lot of tax problems for the group and especially for Ron and Linda. When one really sat down and considered it, LTA was a small-scale energy producer; they not only sold off their ex-

cess electricity, but they were keeping several area people in affordable fuel.

One would have thought that with the exempt cooperative status, their tax problems would have been over. But an IRS Special Agent (they're the ones who get to carry the guns) showed up and began to question them over the fuel tax. Ron explained to the man that they were consuming all of the biodiesel they produced and had sold off excess fuel that had already been taxed. Ron had enough records to convince the guy, provided he didn't dig too far, and he set them up to pay the tax on any biodiesel they sold for other than off-the-road use. That sort of qualified as a near miss. The soybean yield was only 45 bushels per acre, but the corn came in at a whopping 144 bushels per acre. They bought a hammer mill so they could process the excess corn into feed for the livestock. The hogs seemed to dearly love the leftover mash from the alcohol production operation.

They also found themselves running short of storage space. They got the contractor to put in a slab and erected a large, insulated steel building. Gary had finally popped for a server and had a network specialist come in and set up and client-server network. Gary insisted that the guy keep the network as simple as possible and had the guy teach him and Derek everything they would need to know to keep the network up and running. In his 'spare' time, Derek had adapted the inventory system he'd developed for the auto parts distributor he used to work for into an inventory system so that they could keep track of their ballooning cache of supplies. Ron put Amy on the payroll and she spent all winter inputting the inventory into the system. Additional computers were added to serve as terminals and more cables were pulled. It finally got to the point where Gary had to add a second, unmanaged 24-port gigabit Ethernet switch.

The Winter of 2007-2008...

For the first time that they'd noticed, the winter seemed far harsher than usual. And, if CNN were to be believed, it was pretty much a worldwide situation. NOAA's website was still extremely vague on conclusions, but the raw data that one could access on the website, allowed for some startling conclusions. The salinity of the Gulf Stream had dropped significantly and the snowfall in Greenland was less than the melt off. And, again according to CNN, small regional conflicts were breaking out in many parts of the world. These conflicts seemed to be over problems with resources like water and food and fuel availability. Fishing catches remained low and Japan seemed to be ignoring the post WW II Constitution and was rearming itself.

John Kerry had been unable to halt the flow of illegal immigrants and had resorted to using troops to guard the US's southern borders. The slowdown in flow of water from the Colorado River had Mexico grumbling loudly. They accused the US of bleeding off all of the water for irrigation. This was hardly the case however and all one had to do was visit any of the manmade lakes along the Colorado to see how desperate the water situation really was. Farm production all over the country had fallen off, especially in states like Iowa and Illinois where farmers depended upon rain and didn't irrigate their crops. The shortage of agricultural production had a startling effect on the price of such

commodities as soybean meal, which had risen to \$340 a ton.

Rather than deal with the fuel tax, Ron just began to fill the 60,000-gallons of storage with biodiesel. They sold off the excess soybean meal partially replacing the income stream Ron had anticipated from the production of the biodiesel. And, recognizing the growing problems in the food chain, Ron bought 4 more Angus cows and another bull together with 4 pregnant sows and a second boar. LTA was turning into a full time farm. And, an interesting situation arose because of the reduced agricultural output. People who owned horses and kept them at stables began to feel the pinch of higher gas prices and higher feed prices and began to sell off their pleasure horses. Gary talked to his cousin Mark in the Inland Empire. Mark was a Vet., and Gary asked Mark to keep him informed of any horses that came on the market cheap. As feed prices rose, horse prices fell and by the spring of 2008, Gary and Sharon had the beginnings of a fine herd of saddle horses. And they were just horses and Gary didn't bother to call any of them Salina.

Ronald had gotten a second of David's boys trained in operating the biodiesel production and LTA was now producing biodiesel 24/7. The tanks filled and Ron was forced to sell 12,000-gallons of biodiesel for 'off-road' use. He made certain that he got the exemption certificate from the buyer who was a straw man for the contractor. In fact, by spring, Ronald had sold all of the biodiesel that they had produced from the soybean crop and the only biodiesel they had on hand was the 24,000 gallons that came from processing the used vegetable oil. AT LTA, it didn't seem to matter much that their fuel smelled like a bad combination of fried fish, onions and fried potatoes.

With his fortunes restored, Ronald paid off the land. He hadn't counted on the price of soybean meal going so high and that and the soaring fuel prices, they were now approaching \$6 a gallon for unleaded regular, he had money enough to pay off the loan. Gary and he got to visiting about the idea of using draft horses and Ronald suggested that a mule probably ate less than a draft horse and they were more readily available than the draft horses. The problem with mules, Gary pointed out, was that they didn't breed and had to be created, as it were. That discussion lasted for a couple of months, almost up to spring planting season. Finally Ron caved in and they bought 6 large draft horses. All they needed was the Budweiser Wagon to put on a show!

Just before planting season, Derek and Amy, with assistance from everyone, else pulled a physical inventory of all of their stored goods. The computer inventory records were adjusted to reflect the actual inventory and Derek had Amy do a printout so that the three old geezers could adjust the inventory of stored goods to better meet their needs. With the completion of the processing of the soybeans, Ron was able to cut the biodiesel production back to a single shift 7 days a week.

With the inventory in hand, the three of them were able to see the holes in their stockpiles. They had far too few repair parts for their farm equipment and other vehicles, for example. In the food area, they had lots of beans and rice, but much of it was still stored in the original bags. They decided that they needed a load of those 6-gallon pails and a

supply of oxygen absorbers to allow them to properly preserve the food. They were long on the home canned vegetables, too, and decided to adjust their 2008 garden accordingly. They couldn't grow rice, but they could try and produce navy, great northern and pinto beans. Cucumbers were definitely cut back; they had enough pickles to last for 3 years. They were following Gunny Highway's advice, *Improvise. Adapt. Overcome.*

All About the Weather – Chapter 10 – Man vs. Nature

Their fortunes improved, Ron and Linda decided to purchase two more adjoining sections of ground that came on the market. This ground they decided would be devoted to production of what they considered to be experimental crops like wheat, oats, barley and other grain crops. A portion of the ground would be devoted to hay production too, with the growing herd of livestock more hay was going to be needed. Ron also picked up a used twine baler so they could bale the hay. [Small 'square' bales]

The time not spent in the fields was devoted to improving the storage of their supplies. They had bought a truckload of 6-gallon pails and lids and a huge supply of oxygen absorbers. Ron and Linda's girls and their families finally moved to LTA from the Ft. Smith area. It took most of the summer to get Brenda detoxed and comfortable with not using, but she was essentially trapped at LTA and even the liquor was kept under lock and key. Speaking of liquor, they ended up producing an excess of alcohol over what they needed for the biodiesel operation and they bought a truckload of once used oak casks from a distiller in Kentucky. They might not be producing the best booze, but they were putting the excess alcohol production to good use.

The weather during the summer of 2008 hadn't fully cooperated. They had more rainfall, but the temperatures were cooler. As a consequence, they were only able to get about 120 bushels per acre from their corn crop and 40 bushels per acre from their soybeans. They did pretty well with the food bean crop that summer and following information from the net, put up the food beans in the 6-gallon pails when they reached the proper moisture content. The experimental grain crops did well, considering that this was their first attempt at producing those crops and they registered a sharp increase in their stored goods.

Life on the farm was particularly boring, but that was good. It was just like any other farm/ranch, filled with a flurry of activity during the growing season followed by a lot of inactivity during the winter months. The difference was that because of the trash farming approach, they were managing four sections of ground with a minimum of people. Since not one of them was a real rancher with years of experience, Ron had put in a bunkhouse (a used doublewide on a slab) and they had hired a couple of outsiders to help with the livestock. The new men were 1st cousins, one a full-blooded Navaho and the other ½ Navaho/½ Mexican. They knew a lot about cattle and horses but were a little shy in the hog raising experience. Ron had the two men ask around and finally they came up with another Native American, with experience in raising hogs.

It shouldn't surprise anyone that the three old geezers referred to the three hired hands as 'the cousins'. Even with the reduced agricultural output, the crop from the summer of 2008 paid for the land. LTA was now at 2,560 acres and Ron decided that the ranch was big enough. For the previous Christmas, Gary and Sharon had gotten Derek an AR-15 Hbar rifle and had it properly accessorized. Mary had seen to getting Derek the Remington 870 combo shotgun. For Derek's birthday in March, Gary had added a M1911 pistol to Derek's arsenal and Mary had gotten Derek a Ruger 10/22 rifle. At least

Derek was now fully equipped in the firearms department, although having those suppressors sure seemed to bother him.

For his Christmas present, Gary and Sharon had gotten Damon a Remington 870 combo 12-gauge and when his birthday came along they added a M1911. Damon was not into rifles, so they figured Damon's arsenal was complete. For Amy's birthday and Christmas, they paid off several of her student loans. There was financial parity with their gifts, but they weren't necessarily interested in parity; it was more an interest in cutting strings that bound everyone to their pasts.

Paula and Mark finally gave up and moved to LTA during early October of 2008. With the economy in the toilet, despite President Kerry's best efforts, and the growing fuel crisis, they simply couldn't make it any more up in Austin, Minnesota. John still kept in touch with Ron and Linda from time to time, but Kevin was absolutely MIA. No one had heard from Ron's other son, Scott who was Jennifer's brother, in so long that they lumped him in with Kevin as MIA. Kevin and Scott, had they been able to find out, were doing just fine although prison food didn't particularly agree with Kevin. Scott hadn't learned a thing and had pulled another bank job and had gotten 25 years. Kevin got involved in drug dealing and had gotten 15 plus an additional 5 for the handgun he had on him when he'd been arrested. At least they were as safe as they could be in prison. As it turned out, everyone who was going to be living at LTA was now in residence except for the women that the cousins would eventually marry and the new children who would come along.

A census showed that the population of LTA was:

Ron & Linda = 2

Jennifer & husband & 3 children = 5

Brenda & husband = 2

Paula & Mark = 2

John = 1 (He'd moved in September)

Clarence, Lucy & sister = 3

Gary & Sharon = 2

Derek & Mary & 3 children = 5 (Junior had died and DJ had come to live with his dad)

Damon & girlfriend & 3 children = 5 (Gary and Sharon had bought Carrie off)

Amy & 2 children = 3

Lorrie & David & 5 children = 7

3 hired hands = 3

Total human population was 40 souls. The livestock population was 2 bulls, 8 cows, 5 heifers and 3 steers, 2 boars, 8 sows, 40 female and 80 male pigs, 300 chickens, 6 draft horses (5 mares and a stallion) and 16 riding horses (2 stallions and 14 mares). All of the adult female livestock had been bred. That portion of the original acreage that was occupied with buildings and the pond was a fenced in pasture for the livestock. The three old geezers had done pretty well for themselves in the time since they had moved to Arizona. The highlights of the stored goods inventory boiled down to a 10 year supply

of food, enough spare parts to rebuild every vehicle from the ground up as long as they didn't need a new engine block or transmission case, plus filters, oils and lubricants that would cover the useful life of the vehicles.

It might be easier to describe what LTA was short on or simply lacked completely. They did not have any trained medical personnel despite having accumulated a huge supply of medicinals, supplies and equipment. They didn't really have anyone who was a properly trained mechanic capable of rebuilding any and all of their equipment. They didn't have a Veterinarian. They hadn't really added to their weapons and ammunition cache except as previously described. They didn't have a hospital or heavy-duty medical equipment like an X-ray machine. Gary had added Banyan Z-1000 Stat Kit and convinced Dr J to prescribe the recommended medications for the new kit and replacement medications for the old kit after assuring Dr J he wouldn't use the kit except as directed by a doctor.

The Winter of 2008-2009...

And then, there were the political and natural climates that existed in the winter of 2008-2009. Politically, Kerry was up to his hind end in alligators. He'd vetoed legislation that would have allowed opening a second oilfield in Alaska, opting instead to send an alternative proposal to Congress calling for more usage of alternative fuels, but his proposal lacked any real specifics. Trouble was brewing with the nations of the Caribbean, too. Kerry had mounted a major campaign to stop the flow of illegal immigrants from that area and Mexico, resorting to the use of the military. To add insult to injury, he began to build a wall around the United States. The only upside to that proposition was that it created a lot of jobs. Food production had fallen to the point that the US was barely able to meet long-standing commitments and the Department of Agriculture and the State Department absolutely prohibited any additional food export deals.

Every oil well in the US was now running at full capacity, but the fuel crunch was more than a crunch, it was a full-blown crisis. Saudi Arabia and the other nations of the Middle East were more than willing to supply crude oil at the prevailing price of \$163 per barrel. However, since US exports had been sharply cut due to the agricultural situation, the US was hampered by an unimaginable trade deficit. The Gulf Stream hadn't stopped, but had continued to slow and the effects were being felt in northern Europe and the British Isles. During this winter, icebergs were spotted the furthest south in over a century in both the Pacific and Atlantic. It was becoming apparent that the governments of the world had finally started listening to the scientists who had predicted an abrupt climate change. Well, at least the governments in the Northern Hemisphere were listening. It was still pretty much business as usual in the Southern Hemisphere because they hadn't really felt the full effect of the climate change.

o

"So Gar-Bear what are we going to do to meet the needs that we still haven't covered?" Ron asked.

“Once you sell off this year’s production Ron, the corporation will be pretty well off financially,” Gary replied, “I expect maybe the corporation ought to think about putting in a medical clinic that could double as a hospital in a pinch and hiring staff to man it. Plus, we need to hire a fulltime mechanic to take care of all of these vehicles. That will probably mean putting in a garage of some kind. That’s all that I can think of. Clarence do you have any suggestions?”

“I suggest that we start finding time to go to the range and go fishing,” Clarence snorted. “Those damned fish ought to be the size of whales by now.”

“Just what kinds of fish did you stock that pond with Clarence?” Ron asked.

“Well, I put in some crappies, some walleyes and some bass, Ron.” Clarence replied. “Then, I added a bunch of bullheads so that the predatory fish would have something to eat. Since we’ve never been fishing, I have no idea what we ended up with. I only know that the lake/pond didn’t freeze all the way to the bottom because there ain’t been no dead fish floating.”

“All right guys, aside from supervising everything, I think it’s time we slowed down some and enjoyed the shooting sports and fishing,” Ron smiled. “I’ll use the money from this year’s production to put in that medical clinic and equip it best as I can Gar-Bear. We’ll hire us a fulltime mechanic too. I think maybe I better think about putting in a couple of more trailers for the cousins and of course we’ll need housing for the medical staff. If we can find us either a young doctor or a highly skilled paramedic we should have the medical base covered. I think, though, we should try to find a young doctor who is married to a nurse. Maybe we can find a mechanic whose wife is a nurse, too.”

“Being you’re going to set up what amounts to a full blown hospital Ron,” Clarence offered, “You might want to give some consideration to a Dentist, too. Maybe you can find a dentist who is married to a dental assistant and we’ll have everything covered.”

“I suppose,” Ron agreed, “And maybe I can get a deal on some used dental equipment and used hospital equipment.”

“Well you’re getting double what you used to for our excess electricity, so even though we exporting less, I’d speculate that the income flow is relatively steady,” Gary remarked.

“The income flow from the excess electricity is pretty even Gar-Bear,” Ron admitted, “But that doesn’t allow for inflation. On the other hand we don’t buy that much stuff on the open market either. You know, we need to put in an orchard so we can stop buying fruit. We could be producing our own fruit in a couple of years and in 3 or 4, have enough to totally eliminate our outside purchases in that area.”

“There you go, Ron.” Gary said, “Now you’re really thinking ahead. Prepare for the

worst and hope for the best is a pretty good motto if we need one.”

“One of the things that concerns me,” Clarence added, “Is the prospect of what will happen around the world if this abrupt climate change is the real deal. There’s going to be real shortages according to that scenario and people are going to start meeting their national needs by force. The nuclear club is getting pretty big these days and I wouldn’t put it past some of those nations to use those weapons in a do or die situation.”

“Well then I guess we need to think in terms of an underground shelter Clarence,” Ron responded. “Let’s get the medical clinic put in this coming year and the staff fleshed out and then we can look into survival in the case of a nuclear event.”

“We damn well better be thinking of survival in case the US gets invaded, too Ron,” Gary injected. “I think we better make weapons and munitions a high priority. We don’t need automatic weapons, but a couple of dozen of those AR-15 Hbar’s properly accessorized and a few more MBR’s might be in order.”

“Hells bells Gar-Bear,” Ron replied, “If the US does get invaded, we’re going to need a lot more than a few rifles and some ammunition.”

“I know it pal,” Gary agreed, “But I’m not certain I know where to get what we need.”

“We can always ask our friendly gun dealer,” Ron suggested, “He doesn’t seem to have any trouble selling us suppressors without getting them registered.”

“I’ll talk to him Ron,” Gary answered, “How big of a budget do I have to work with here, partner?”

“Let’s say \$100 thousand tops, partner,” Ron replied, “Maybe more if we can get a good deal on used medical equipment.”

All About the Weather – Chapter 11 – Man vs. Man

Going into the spring of 2009, they did their annual periodic inventory and found that their inventory shrinkage was minimal, as it should be. The only real variances were in the food supplies and those were accounted for by the fact that people didn't stop to weigh how much flour or sugar or other bulk commodity they removed from the inventory. But then they had so much of those things that a few dozen pounds one way or the other didn't really matter. Ron put an ad in several national papers seeking the people they needed to round out the staff at LTA. One of the things that made the offered employment attractive was the free housing, fuel and food.

Things were starting to get difficult in the US and the Gulf Stream hadn't even stopped, yet. The past two winters had been cold, especially in the northern latitudes of the country and a lot of people depended upon home heating oil for warmth. The extremely high fuel prices had essentially started a war within the country. There weren't any bullets flying, but Congress's first order of business was to pass the legislation a second time opening up Alaska for petroleum development. The bill passed both houses of Congress with such an overwhelming majority that President Kerry had no choice except to sign it into law. Only time would tell if it were too little, too late. It seemed that the only thing the two scientists who had written that scenario had gotten wrong was the timing. Things were actually happening about 3 years ahead of their projected timetable.

Ron contracted the contractor to put in a slab for the medical clinic. The contractor's business was way down, due to the economy, and he offered to put in the shelter that Ron mentioned in passing and a basement for the clinic for an unbelievably low sum. Ron decided that the iron was hot, so to speak, and he took the guy up on the deal. He also supplied the contractor with all the fuel the guy used to complete both jobs. It was a good deal for both of the men, the contractor kept his people employed despite the poor economy and Ron was a year ahead on the shelter. To make things even better, the contractor moved the cousins' house, put in a basement and reset the house. He also offered Ron a package price on 4 additional basements at \$3,750 per including plumbing the utilities. Awestruck at the offer, Ron told the guy to put in 8 more basements. Ron knew for sure that they would need 3 or 4 for the new medical staff and a couple for the cousins when they started to get married and wanted homes of their own, so he just went ahead.

Then, Ron got even luckier and was able to find all the used medical equipment they wanted for the clinic and then some. He had hired a young doctor who was married to another young doctor. One was an MD and the other a DDS. The two of them supervised the selecting and installation of the medical equipment in the new steel building Ron had erected as the medical clinic. The actual clinic and all of the equipment was housed in the basement of the new facility and the main floor area was used for wards, offices and storage of non-perishable medical supplies. With the bargains Ron had managed to get, here and there, he got a lot of bang for the buck. Plus, the soybean meal was up to a record high of \$500 a ton and what biodiesel he sold, strictly for off-road use naturally, went for \$5.25 a gallon.

Gary had approached the gun dealer carefully, but openly. He laid out the way the folks at LTA saw things going down and asked the dealer with full candor what the dealer could do to help them out. Having dealt with them for some years, the dealer knew he wasn't going to be in for any trouble and he just as candidly told Gary what he could and couldn't do. It really depended upon how picky Gary was about where the goods he bought came from. Gary explained that they were trying to limit the breadth of their armory to a few select calibers of weapons such as 5.56, 7.62, .357 Magnum, 9mmP, .45 ACP, .22LR and 12-gauge. The dealer said that he understood that well enough but if the truth were known, he could supply Gary with M16A3's a lot cheaper than the Colt Hbars. He could also supply a lot of 'military surplus' ammo especially in the 5.56 and 7.62. The 7.62 and the 5.56 was American surplus that the government didn't know was surplus just yet.

When it became abundantly apparent where the dealer was going to get the weapons, Gary started to discuss with the guy what he could get for \$100,000 cash. When the dealer wrote up a list, Gary almost fell off his stool. The dealer's price was the government's replacement cost on the weapons. The dealer also explained that he was only paying off the government's replacement price, but that a lot of military equipment was showing up on the market because of the economy being in the toilet and fuel prices being through the roof.

The dealer also went on to offer Gary the M4-FA suppressors at his cost plus a \$25 installation fee. He could also get the M1A rifles and he assured Gary that they wouldn't be any of the junk that SA had put out for a while. The two men dickered and adjusted until the list satisfied Gary. The list included 48 M16A3 rifles converted to gas piston, 12 with M203 launchers, 4 M240s, 48 M1A Loaded rifles and 4 Browning M2HB, .50BMG. They would need more ammunition in the future, it was certain, but the dealer assured Gary that ammo would be no problem until TSHTF. From that point on, all bets were off. The price of the total purchase was \$153,600, not counting the suppressors, extra magazines and ammo. Counting in the suppressors, installation, extra magazines and ammo brought the total to an even \$200 thousand.

"Ronald, I couldn't make a deal at \$100k," Gary bluffed, "The best I could do was \$200k, but we won't need any more equipment for the foreseeable future."

"What about ammo?" Ron asked, not surprised that Gary had gone way, way over budget.

"He said that he can supply ammo until TSHTF, partner," Gary replied, "But I think that the sooner we can put up the ammo the better."

"You should be thanking your lucky stars that I made out as good as I did with the contractor and with that used medical equipment Gar-Bear," Ron said, "I can swing \$300k if we sell down our biodiesel to a single tank. But you'd just better hope that we get at least 40 bushels to the acre on those beans this year. I had wanted to put in a second

wind turbine to have extra energy to sell, but that can wait a year. Go ahead, buy the weapons and get an extra \$100k's worth of ammo. I'd didn't see any Claymore's or hand grenades on that list, can we get some of those?"

"I believe we can get anything in the military's inventory partner," Gary chuckled, "But I'll just add a few cases of those M67 grenades. Want some C-4 while I'm at it?"

"Round out the ammo stores first and add the hand grenades," Ron said. "If you have any money left over, you can get the explosives."

CNN reported a rash of armory thefts in the weeks that followed at Army Forts on the East Coast. Gary sort of put 2 and 2 together and figured he knew where all those stolen arms were going to end up. However, the other news on CNN pretty much insured that he didn't care. As they entered the fall harvest season during 2009, the Gulf Stream had all but stopped. Forecasters were predicting the worst winter for Europe in centuries, not decades. Some of those regional conflicts were blossoming into full-scale warfare and it appeared to be just a matter of time before TSHTF.

The soybean crop came in at 42 bushels per acre and Ron was relieved. They'd cut back on some of the other crops because they were producing far more than they could use or store. Consequently, an extra 640 acres of soybeans and an extra 40 acres of corn had been grown. Seeing the handwriting on the wall, Ronald had spent right down to his absolute reserves purchasing additional sodium hydroxide. He had enough on hand to process all the biodiesel they were capable of handling 24/7 for 3 years non-stop. And, when the money came in from their surplus soybean meal and biodiesel this year, he intended to lie in an even larger supply and crank it up to the 10-year level too.

Maybe the situation around the world explained why Ronald had been so lax with Gary with regard to the weapons and munitions purchases. It wasn't that Ron allowed the purchases out of fear, but rather out of gratitude that all of their families were safely tucked away on a 2,560 acre ranch in Arizona with enough supplies for 10-years and the potential to produce food for their lifetimes and the lifetimes of their children and grandchildren. And, that was a whole lot of gratitude.

Interestingly enough, the ATF caught those guys who had stolen the weapons and munitions from those East Coast armories. The ATF might be unpleasant folks to deal with, but they were reasonably efficient LEO's. The problem was that the trail started and ended with the thieves. They had sold the merchandise to some guy named Bob who spoke with a phony southern accent and was driving a truck with the plates blacked out with mud. One of the thieves did mention that the exhaust from the truck smelled like a combination of fried fish, onion rings and French fries but there were thousands of vehicles running on biodiesel these days. In fact so many were producing biodiesel that the IRS had been forced to give up enforcing the fuel tax laws. And, anyone who didn't have a longstanding arrangement with a business that used vegetable oil couldn't put his or her hands on a drop of the stuff.

Jack called Gary and told him the shipment was ready to be picked up. He assured Gary that everything would be to his liking. He even had some extra items that Gary might want to look at and give some consideration to. He indicated that he had ended up with a bunch of ALICE gear that he had no use for and was throwing it in. But, he had ended up getting one hell of a deal on the NATO Interceptor vests with the level IV plates and couldn't pass them up. They were still brand new, in the packages and had a 2009 manufacture date. They were primo stuff, he said, and Gary could have all 60 vests for an additional \$25k. Gary told them that they'd come up with the money somehow; it was a pretty good offer.

Ronald proved to be easy to convince to let loose with the extra \$25k. Actually he was wondering why Gary hadn't thought to include vests and extra ALICE gear in the first place, but he figured (hoped) that Gar-Bear knew what he was doing. Maybe Gary had missed on that one, but it all seemed to work out in the end. More often than not, it seemed that they indirectly made their own luck. Maybe Gary was right; maybe it was all about being prepared. If Gary was focused as far as this survivalist stuff went, Gary was entirely focused on being prepared and on intentional Survivalist communities. Gar-Bear did like to write that fiction of his, but the theme never varied much. The new information and links he included in his stories usually came early on in the stories while Gary built his community.

o

The Winter of 2009-2010...

It got cold early this year and neither Ron nor Clarence could remember such a cold winter. Gary was from Iowa and in March of 1982 on the day he made the final decision to move to California, the wind chill factor had been -85°. It was cold all right, but if the predictions were right, it was going to be a lot colder in the coming years. They'd gotten the harvest in and stored and were now running 24/7 converting the soybeans to bio-diesel. That little bit of extra alcohol they produced by accident went into a keg. It was turning out that they were producing about one keg of whiskey a year, not a lot, but in the years to come, it might provide comfort to the kids or grandkids.

Having just three biodiesel processing units worked out about right and they had put in extra pumps and parts to keep the units running well into the future. They had finally found time to do some of that fishing and Clarence was right, the fish were pretty good sized. They had also found time, finally, to get to that range Clarence had built and had put in long hard hours recovering their firearms skills. Everyone on the ranch, including the doctor and his dentist wife and the mechanic and his nurse wife and the three cousins and their new wives was expected to spend time on the range. Everyone was expected to be proficient with the M1911, the AR-15/M-16 and an M1A MBR. The doctors could not be expected to run around shooting people, if it ever came to that, but they needed to be proficient so they could at least protect each other.

The lady dentist was well schooled in anesthetics and if a situation ever arose where

surgery needed to be performed, she was pretty much up to the task of assisting her husband. He was Jim, she was Tracy and their last name was Ross, if anyone is curious. So far Jim hadn't been called upon to do more than treat a sprained ankle or the occasional cold. Because of this, the two of them reached out among the friends and families of the cousins and the cousin's cousins and the two of them were honing their medical skills. The three old geezers thought that such a practice made for good relations among their neighbors and even purchased the supplies the doctors used spreading goodwill. A person never knew when having a friend or two in the greater community might just come in handy.

This winter was proving to be especially hard, even for a northerner like Gar-Bear. But, they had anticipated every need and no one had to look any further than the supply building for ski pants and parkas. They also had a large supply of tires, including snow tires and they proved to come in handy during this winter. The garage they'd put in for the mechanic had every possible device including an alignment rack, tire balancing machine, metal lathe and a good supply of materials from which the mechanic and former machinist's mate could fashion anything he needed if it weren't available.

"This damned snow is butt deep on a 9' Indian," Ron complained.

"I'd be careful about my language if I were you," Gary laughed, "One of the cousins might just want to bury the hatchet in the back of your head."

"I've got to give it to those three guys," Clarence said, "They do a wonderful job with the livestock and work hard. They didn't do too badly in the wife department either. That Maria makes some darn good Mexican food."

"I'm glad to hear that partner," Gary replied, "I wondered if it was a good idea to grow hot peppers, but I think you just answered my question."

"It turned out to be a good idea to put in the burr mill to grind flour with too Gary," Clarence observed. "Is it just me or is the flour we make better than what you buy in a store?"

"Other than being whole wheat flour," Gary said, "I can't think of anything different about it, but it does taste good, that's for sure. It didn't make sense to put in one of those smaller grain mills, that's why I hunted around until I found a 12" stone burr mill to grind our corn and flour."

"It must be just because it's whole wheat then," Clarence agreed. "I'll tell you though; it was pretty smart to put in that commercial oven to bake bread. Look just like store bought bread."

"It's all in the pans you use Clarence," Gary explained.

All About the Weather – Chapter 12 – Nature vs. Nature

“I just bought some 3-strap 1½ loaf pans and some 3-strap Pullman pans with lids Clarence,” Gary explained. Those ovens we installed in the new supply building are preset for baking bread, but we could crank them up to make pizzas if we wanted to have a pizza party some time.”

“Pepperoni?” Clarence asked.

“I guess we’re going to have to figure out to make various kinds of sausages Clarence and we need to start making cheese out of our surplus milk after the calves get weaned,” Gary announced. “I guess when you stop to think about it fellas, there are a whole lot of things that we’ve always taken for granted that we’re going to have to learn how to do for ourselves. I found a place on the net and ordered a grinder, casings and spices. I didn’t get any pepperoni spice, but they have it so I guess we’d better all take a look and see what kinds of sausages we want to make. I also found a couple of web-sites that sell cheese making equipment and supplies. But, there are hundreds of the places, all I did was search for cheese making supplies.”

“I think that if we’re going to be lying in supplies like that,” Ron said, “We need to be thinking very long term. I caught a program on TV last night and at first I thought it was another one of those prediction programs. Once I got into it, I realized that they weren’t talking about what might happen, they we talking about what is happening right now. The Gulf Stream has slowed to the point that they think come spring it will flat out stop. That’s pretty much in keeping with that scenario we’ve all been worried about.”

“Well, Ronald,” Gary said, “It seems to me that not everyone read that scenario. Some of the things that were predicted to happen in the 2010-2020 period are already taking place.”

“Gary, you have to realize that those scientists were applying logic to the problem,” Clarence explained. “There’s darn little logic involved when people are hungry and thirsty. The smartest thing I ever did was to come to Arizona with you two survivalist nuts.”

“I represent that,” Gary chuckled.

“Me, too” Ron added.

“What the survivalist part or the nut part?” Clarence asked in good humor.

“Yeah,” they both responded.

o

February 2010...

Gary's mouth fell open at the news that an iceberg had been spotted 100 miles east of South Carolina. And, it wasn't a small iceberg either when you compared the size of the Burke class destroyer to the berg. Several news organizations had hired charter flights to haul cameramen out to the berg. The berg had gotten as far as South Carolina and had then just stopped dead. Gary wondered if that meant that the Atlantic thermohaline had finally ground to a halt. Whatever it meant, it couldn't be good news. He had gone ahead and ordered more spices for making sausages and a large quantity of cheese making equipment and cultures. So far as the preparedness went, LTA was ready come what may. Ronald, in an uncharacteristic move had taken the money from the last 24,000-gallons of biodiesel and spent them with Jack. There wasn't much doubt where Jack was getting the goods, more armory thefts had been reported, but if they were going to defend the ranch, Gary supposed that they were better off with too much than too little.

Ronald clearly had his own agenda when it came to arming the ranch. He bought some more ammo, but most of his purchases were Claymores and M72 LAW rockets. Although the US had reportedly replaced the M72 with the M136 AT-4, apparently the AT-4 was out and the Javelin and M72 were in. Ron had also added concussion grenades and M-14 and M-16 land mines. He spent all \$156,000 he'd gotten for the sale of the biodiesel (24,000-gallons at \$6.50 a gallon) on the purchase. It was more than a little obvious that Ronald was expecting trouble big time. One thing the people at LTA had been extremely careful about was letting out knowledge of the vastness of their food stores. To the best of their knowledge, no one knew exactly how much food they had, not even their contractor friend or Jack the gun dealer. And the most fuel they'd sold in any one instance had been the 36,000 gallons of old diesel that went to the contractor. Now the contractor had excavated all of the holes for those underground tanks, but he hadn't been around when they were installed.

Lots of people had pieces to the puzzle, but no one had all of the pieces or a true picture that would tell them where their pieces fit in. That was about to change, but only for the better. Ron had added those 8 homes. 2 went to the cousins. 1 went to the doctor/dentist couple. 1 went to the mechanic and his nurse wife. Because one of the cousins had married a nurse, Ron had ended up with four empty homes. Ron considered it expansion room for the families. However, the expansion came from a completely unexpected direction. First, Jack and his wife Norma (schoolteacher) wanted to buy in and move to the ranch. It made sense to Ronald to have such an important supplier readily available, so he sold them a home and for the \$1 they got the 99-year lease. Shortly thereafter, our friend Jim Jackson, the contractor, and his wife Darla (schoolteacher) wanted to buy a home and move in. Again, it made sense to have such an important 'supplier' under the same roof and Ron and Linda sold them the second home.

Realizing that having more people meant having less supplies per capita, the three old geezers got in a pickup and drove to a grocery supplier, they loaded up on rice and the oddball items that they couldn't produce on the ranch. They ended up with 10 100-pound bags of rice and the back seat and remainder of the camper shell piled full of

spices and other foodstuffs. They unloaded the pickup and headed back out, returning the second time with the entire backseat and camper shell filled with light bulbs. Then, Ronald, Gary and Clarence got on the net and began ordering items of great urgency, like toilet tissue, by the semi truckload. The toilet tissue and things of that nature were only moderately higher in price, buying in the quantities that they bought, but the freight darn near floored them.

That was a quick lesson and they contacted the suppliers who hadn't shipped their orders yet and asked that it be delivered by rail. It would take a little longer and everything was FOB the rail destination, but they had biodiesel and it was still costing them less than \$1 a gallon. Ronald decided that it was time they had their own semi tractor and trailer. By the time they transported everything they ordered, the cost of the tractor and trailer would almost be recovered. Even considering the demurrage they ended up paying because they couldn't unload the railcars in the allotted time, they were money ahead. Having tied up most of the loose ends caused by the two new residents, the men sat down with the updated inventory printout and went over the document line by line giving each and every item careful consideration.

The economy was so far into the toilet that manufacturers were all but giving their merchandise away. If they could break even on a transaction, they considered it a good deal. Given this circumstance and given that they had their own semi and virtually unlimited fuel, the three men decided that some of the things they had were due for an upgrade. The computers, for instance, were old and were in need of replacement. So was a lot of their other equipment. Gary got on the phone to Dell Computer and they would sell him a powerful server, the latest generation computers and most anything he wanted at cost plus 5%, FOB Round Rock, TX. And, for a reasonable fee, they would even install and debug the system.

Cost on the computer equipment, for example, was so low that Ronald said they should buy 2 of everything and 4 complete sets of HDD's for the server. They added other things too, like lots of extra plumbing fixtures, parts and pipes, spools of electrical wiring, switches and fixtures, a second wind turbine (finally) and enough spare parts to rebuild both turbines several times. The three men tried to anticipate every need and even speculated a little and bought things that they probably wouldn't need, but as sure as they didn't have it, they would.

When they reached what they determined to be the absolute point of diminishing returns, Damon and the three old geezers set out to cover the country and pick up everything they thought they should buy. Two of the cousins followed along in the truck with the glycerin tank. However, the tank had been emptied, cleaned out and refilled with biodiesel and they had enough of everything to circle the country twice if need be. The way they figured it, this would be their last buying extravaganza. They left just after the first of March and planned to be gone for about 3 weeks.

o

The 3-week trip turned into a 5-week trip mainly due to delays at every stop. However by mid April, when the men returned to LTA, they were as prepared as they could be. In their absence, Linda had sold the other two trailers to Jim Johnson's two foremen who had managed to sell their homes and were able to pay cash. Their wives, an oral hygienist and a supervisor for a baking company added needed skills to the ranch. By actual count, the ranch was now up to the 40 souls from the last census plus: the doctor dentist couple, the mechanic and his wife, Jack and his wife, Jim, his wife and two teenagers, the two foremen and their wives and 5 children plus the three new wives of the cousins, 62 people. A review of the inventory showed that LTA had approximately a 12-year supply of items they couldn't self-produce and an unlimited ability to produce food and energy.

It only took the Dell representative a week to install all of the systems except for the server. He set the new server up to run in parallel with the old server and over the course of the following week had everything up and debugged. At Jim's suggestion the ranch added a freight car of concrete block from a New Mexico supplier, a carload of cement and a second carload of assorted lumber and hardware. Finally, Ron called a halt to the entire process. You could hone a knife forever, he said, but you could only get it so sharp, whatever that meant.

It came as a sudden shock when Gar-Bear went on the net and saw the price of gold. They really should have accumulated some gold when the price was more reasonable, but they had been busy investing every dollar of their money and every ounce of their energy into getting LTA 100% independent. Well, 99.99%, because there was this guy named Murphy who always seemed to pop up when you least expected him. No doubt they had forgotten something, and it could come back to haunt them. But, they were an enterprising group and if they couldn't buy it, but needed it to survive, they'd steal it.

Spring came late in 2010 and it occurred to the three amigos that they had indeed forgotten something. It was something someone had said (thanks Hasher) and they decided that those fruit trees would do a whole lot better if the small orchard were in a greenhouse. Murphy could get the hell out of the way this time; it paid to have friends in the community. So while Mary continued to pick up the used vegetable oil (the volume was lessening) Derek continued to turn it into biodiesel. The boys planted the current year's crops while the cousins tended to the birthing of this year's new livestock crop. Jim and his 2 foremen rounded up a crew and poured footings and erected a greenhouse around that small orchard. There were probably still 101 things that they overlooked, but, where there was a will, there is a way, albeit powered by a .50 cal machinegun and a .30 caliber rifle if necessary.

Speaking of which, one of Jack's 'suppliers' called him and offered him one hell of a deal on some additional ordinance and a diverted semi-load of ammunition. Jack was a member of the community now and he didn't hesitate to take the guy up on the offer. If the community, e.g., corporation, didn't wish to pay for the materials, Jack had enough money salted away that he could hold the purchase and sell it when the opportunity presented itself. The ordinance turned out to be a six M107 Barrett rifles, complete with

3rd generation day/night scopes, 50 cases of match ammunition for the rifles, six Tac-50 McMillan rifles with the Nightforce 12-42x56 scopes, McCann Night Vision rails and MUNS night vision optics plus a representative assortment of 5.56 and 7.62 linked ammo. Also since Jack was a member of the community, there was no markup on the purchase. It probably took Mr. Ronald Green all of about 2 seconds to agree to the purchase. They were flush with cash from a sale of biodiesel (\$7/gallon) and the guy with the goods was more than willing to let them go for cash on the barrelhead (\$25k). Jack took the three 'cousins' with him and they unloaded the shipment into a storage locker and paid the guy his cash.

The next day, the cousins took the semi and a pallet jack to the storage locker and unloaded its contents into the semi. The last vestige of empty space at LTA, the storage room in the 'bunker' became the repository of their latest, and it proved to be next to final, purchase. The final purchase was an order from Jack to Hornady for 40 cases of 750gr A-MAX Match and 120 cases of 7.62, half BTHP Match and half A-MAX Match.

o

Officially, the Gulf Stream ground to a halt at 0930 hours on Sunday, September 4, 2010 although one could never be certain of these things. In and of itself that was neither a good thing nor a bad thing, it was simply a fact. The consequences of that event were of the greatest significance. Peter Schwartz and Doug Randall hadn't missed it by far. In fact, come to think of it, they hadn't missed it at all. They hadn't set a date; all they'd said was, *After roughly 60 years of slow freshening, the thermohaline collapse begins in 2010, disrupting the temperate climate of Europe, which is made possible by the warm flows of the Gulf Stream (the North Atlantic arm of the global thermohaline conveyor).*

Kerry was still President, though by now, nobody was sure why. It looked to be 2012 before the second oilfield was open in Alaska, as if the environment could stand the effects of the additional pollution. When the price of oil had hit \$180 a barrel, Congress had imposed a total embargo on all petroleum imports and exports to all of the OPEC countries. That had pretty much been the straw that broke Mexico's back. Canada and the US were still fighting over the people who had fled to Canada to avoid the draft Kerry had managed to get imposed and the deserters who had fled the wars in Iraq and Afghanistan back when there had been wars in Iraq and Afghanistan. The original conflict dated back to 2004 and the latter conflict arose before Kerry was forced to pull out the troops. There weren't a lot of people involved, but the President had managed to say all of the wrong things at the wrong time and the Canadians got royally po'd. Then Kerry started to build those damned walls because he'd read the Schwartz and Randall document and needed a public works program.

The wall between Canada and the US was proceeding from the east to the west and from the west to the east. The area in and around the Great Lakes, to the east to the Atlantic needed no wall; there was the natural waterway that served as a border. However, from Minnesota to Washington, progress on the wall was coming along nicely and

only an area in Montana needed to be completed. On the Mexican border, only the segment that comprised the Mexico, New Mexico border remained incomplete. And the President ordered the work escalated to a 24/7 schedule the moment he heard that the Gulf Stream had stopped dead in its tracks.

All About the Weather – Chapter 13 – Country vs. Country

Somehow, somewhere, someone had gotten the idea that Kerry had built a brick wall around the United States. There probably weren't that many bricks in the whole world. The guy must have read something into something or something. Anyway, the wall was far less complicated than a masonry wall. It was two rows of steel posts about a dozen feet high with 30' between the rows. The fences were strung with barbed wire and concertina because the military had a lot of it. Not enough you understand, but enough to get started. The US steel industry was in the toilet along with every other major industry in the US and they were more than happy to take the steel that they had been using to produce automobiles and divert it to wire manufacturing companies who were more than happy to change over to making barbed wire and so on...

In no time at all, e.g., by the time the military had used up their supplies of barbed wire and concertina, more barbed wire, concertina and razor wire was rolling off the assembly lines. Or, do they really assemble barbed wire? Anyway, they strung the concertina first and pulled the strands of barbed wire through the rings of concertina and then layered more concertina over the existing rolls. That's probably why the whole project was taking so long; there was a shortage of leather gloves. Then, of course, the whole thing was topped off with razor wire that had been diverted from prison construction. And just ask anyone who worked with razor wire; even leather gloves didn't really protect your hands.

And why did they build those walls 30' apart, you might ask? I'm damned if I know, maybe because that was wide enough for two Hummers to pass in the night. Although if the truth were known they didn't really have enough fuel to run those Hummers up and down the rows between the two fences and there weren't any gates either. Both fences were well within the US border and what they did instead was string some lightweight wire that was connected to an alarm box about every ½ mile that sent a radio signal that indicated where a breach in the wall had occurred. Then, when they got the radio signal of a breach, they launched a couple of Apache Longbows (Mexico) or Cobras (Canada) together with a Blackhawk with an infantry squad. The whole thing was a nightmare because every attack helicopter in the US inventory was tied up protecting the borders. And, if that weren't bad enough, the only times the Canadian alarms had been set off was when a Moose strayed into the fence and broke an alarm wire. To make matters worse, the alarms were going off so often on the Mexican border that they had to ignore alarms just to let the choppers refuel. But that problem soon resolved itself because soon every alarm there was on the US-Mexico border was going off at the same time. And then, the batteries all died in the radios and there wasn't any alarm system on the Mexican border.

Did I forget to mention that the border with Mexico was 3,141km long and the border with Canada was 8,893km long including 2,477km with Alaska? Of course the Canadian border included all of those waterways, but between the US Coast Guard and the US Navy there weren't enough boats to guard the waterways so instead, the Army had troops strung out along most of the border that consisted of the waterways. Which didn't

work because of the thousands of miles of shoreline along the Great Lakes.

Anyway, things were actually pretty peaceful along the Canadian border. The Canadians were miffed about the unilateral action of the US and they patrolled the border regularly and arrested anyone within a mile of the border. The Army went along and removed all of those radios and recharged the batteries. Instead of using the alarm wire, the Army started running continuous patrols with the Apache guns ships and eventually were forced to pull the Cobras from the Canadian border to be able to provide adequate coverage. The end result was that the US's borders were effectively sealed against intrusion from Canada and Mexico. However, if one recalls the scenario that was the start of this whole adventure, the military was forced to withdraw a substantial portion of its forces to protect the coast from Georgia around the Florida peninsula and into the central Gulf of Mexico to halt the steady flow of refugees from the Caribbean. Which left the Marine Corps Cobras to guard the Mexican border.

o

At LTV, the men watched the news reports of the progress of the border fences with a mixture of alarm and amusement. They were alarmed at the prospect of the US becoming a fortress. Fences worked 2 ways, they kept people out and they kept people in, at least in theory. They were amused because the 46 miles of fence that the US Border Patrol had erected years earlier hadn't really done much to keep the illegal aliens out despite the Border Patrols claims to the contrary. Moreover, if the Mexican Army did invade eventually, as some were suggesting they might, those barbed wire fences wouldn't even slow them down. The authors of that scenario had suggested US-Canadian cooperation, but the scenario had only been a best guess. And, that scenario had been written 8 years before the 9/11 attack and things had changed a whole lot in the 18 years since the two guys wrote the report.

The supply of used vegetable oil had dried up to the point where it was no longer worth it to send Mary out to pick it up. The market had begun to dry up for their biodiesel, too because Ron's largest customer had been Jim. With the economy in its present state Jim and his 2 foremen had 'retired' to LTA primarily because the business had gone belly up. And, if one really thought about it, the quintessential Devil in the whole matter had been oil and America's insatiable appetite for the product.

Canada did not need the US for much of anything. The country was rich in hydrocarbons, timber and minerals. Large portions of the country were used for agriculture and would continue to grow crops until the climate change halted agricultural production. In many ways there was a pervasive attitude among Canadians that the US looked down its arrogant nose at their cousins north of the border. The ongoing dispute over French vs. English that had threatened to break the Dominion into 2 separate nations had been resolved and French was now the 'official' language though most Canadians spoke English. The days where one could freely cross the Canadian border had ended a couple of years back and up until travel between the two countries had been all but banned, it took a passport to enter Canada. Now, a Visa was also required and the Canadians

weren't handing those out.

Mexico remained convinced that the US was diverting all of the water from the Colorado River for its own use. Even taking the representatives on a tour had failed to convince them otherwise. In truth, the ongoing drought had all but dried the Colorado up. The Mexicans asserted that the US had built a dam further upstream and was trapping the water. The drying Colorado, they asserted, was just a show the US was putting on to avoid having to supply the water Mexico so desperately needed. Interestingly enough, that darned fence was keeping Mexicans in the US who wanted to return home. All of those labor intensive, low paying jobs were disappearing. Partly due to the ongoing drought and partly due to Americans taking second jobs just to make ends meet. The long lines at the few official border crossings remaining open were on the northern side of the border, not the southern side. Even Mexico had become more attractive than living in the US.

o

"Did that iceberg melt yet?" Clarence asked anyone who could answer.

"I don't know partner," Ron replied, "With the fuel situation the way it is, the networks stopped covering it."

"And, I suppose that information from that Destroyer the government had on-scene is classified," Gary chuckled.

"Putting in that second turbine was a real Godsend," Ron commented, "The utility company is taking all of the extra 675kw we can spare. We really don't have any biodiesel to sell until we bring in the crop next fall. Derek and Jason are processing the soybean oil, but once our tanks get filled up, they'll only process it to keep the tanks topped off."

"Maybe we ought to give some thought to changing our crop mixture next year Ronald," Gary suggested, "We can probably get more for some of the other crops. And, we don't really need to produce more soybeans than we need for the oil and meal we consume ourselves."

"Actually Gar-Bear, I was thinking about putting in some winter wheat before the snowfall and pulling two crops off the land this year," Ron explained.

"How is the corporation in the money department Ron, if I may be nosey?" Gary asked.

"We're sitting on just shy of $\frac{3}{4}$ of a million, partner, why do you ask?" Ron responded.

"Oh, I was just thinking that it might not hurt to put in another fuel tank or two and another storage building," Gary replied absently. "If you do put in winter wheat, we're going to need somewhere to store it until we can get it to market."

"I've been out on the net Gar-Bear," Ron smiled, "I think a grain silo would solve the storage problem for that wheat crop. And we might want to put in a second one for the soybeans. I just have the feeling that we'd better get all of the agricultural production we can before the climate changes and we can't grow anymore. We can up the corn production too and store the extra in the overhead in the corncrib."

"Do you really believe that it's going to get so bad that we can't grow crops, Ron?" Clarence inquired.

"I don't know one way or another, my friend," Ron replied "But we might have trouble getting water to irrigate the crops and we are above 4,000' you know. I'll tell you what; I'll sell off 48,000-gallons of biodiesel. That will give us enough money to put in the 2-grain silos and that extra storage building that you want Gary."

"Ron, maybe it would be more economical to put in 3 grain silos and just convert that corncrib into a storage facility," Gary suggested.

"Well, that corncrib is pretty large, Gary," Ron thought out loud, "Ok, we'll go that way. We can get Jim and the others to put in utilities to the building come spring and we can insulate it. Heating it may be a problem, though, it's a big building."

"Ron has a point there, Gary," Clarence added. "And what are we going to do with all of that space?"

"I thought it might be nice to centralize all of our munitions fellas," Gary responded. "We have them stored in both of the storage facilities and the entire storage room of the bunker if full of munitions. I realize that we don't have enough to fill the corncrib, once it's converted, but that will free up other storage space we can put to better use."

"You do that and one bomb would take out all of our munitions," Ron countered.

"Maybe Ron, but I wasn't planning on painting a bullseye on the roof or putting up a sign that says 'Munitions-Drop bomb here'," Gary laughed. "You know, there's nothing here on this ranch that would lead anyone to believe than it is anything more than a ranch. I mean think about it guys; we're producing crops and livestock and except for the extra storage and processing buildings, LTA looks just like any other ranch."

"I know one thing we could do with some of the extra space in that new armory of yours," Clarence offered, "We could consolidate all of our food processing into the unused portion of the building and have it all in one place. We could put in a large sub-zero cold storage too."

"I think that would be a great idea Clarence," Gary smiled, "And it would give a whole new meaning to the expression guns vs. butter."

o

With their plans pretty much worked out to cover the next year or two, Ron went looking for a seed source so they could put in a crop of winter wheat. He found several suppliers and ordered the seed grain for immediate delivery by rail. He also found a silo manufacturer up in Iowa and contracted for 3 silos to be put in as soon as they could begin work, which turned out to be immediately. It was easy to sell off 48,000-gallons of biodiesel; the Army was buying all of the fuel they could find. With 4 of the 5 fuel tanks empty, they resumed biodiesel production 24/7.

Summer, 2011...

Obviously they still had a lot to learn about farming. Winter wheat isn't harvested until July and July was too late in the year to plant other crops. But, they did get the silos in and they managed to fill 2 with wheat. Given the constraints of a very short growing season due to their screw-up on the wheat, they ended up planting an extra large garden. That caused an additional problem in that they ran out of quart jars, but they were still available and Ron bought a railcar of jars and a partial railcar of canning lids. Nobody claimed that the three old geezers were geniuses when it came to farming, but they were doing pretty well for themselves, all things being considered. Good fortune came in the fact that Ron didn't sell off the soybean meal and they had an ample supply of feed for the livestock. They were also able to get one cutting of alfalfa before the 2011-growing season ended because of a very early winter. However, they'd need to fill the third silo with oats.

All About the Weather – Chapter 14 – Treading Water

They had ended up moving all of the food processing to the converted corncrib. The alcohol distilling operation was also moved to the building and the smaller building where they had produced their alcohol was converted into a large -60 degree storage facility. The grain silos they put in were the largest the manufacturer made and someone got the idea that they could seal up one of the silos and flood it with nitrogen to preserve the wheat. Good idea on paper, but it didn't work in practice; they couldn't get that good of a seal on the silo. On the other hand, they had displaced all of the oxygen and they periodically pumped the silo full of more nitrogen, greatly enhancing the life of the stored crop.

The three old men found that they actually had a market for the farm production they were generating. From time to time, they sold off a few hogs or a few bags of flour or a beef or two. And, they discovered that they had a problem they hadn't properly anticipated. Those canned goods they had produced in abundance definitely had a shelf life. It was a lot longer than most people suggested, but they found that after a period of time the canned goods started losing flavor. They solved that problem by selling off the older canned goods at a reduced price and posting signs offering to buy back the empty pint and quart jars. But, they were learning, slowly but surely.

Life, it turned out, was a series of lessons and one either learned or eventually died. They might be getting older, but there was nothing wrong with their brains except the occasional memory lapse and the younger people were learning the same lessons as the old guys and those younger people didn't have memory problems. The population of the ranch was growing, too. The cousins must be good Christians; they were being fruitful and multiplying. And, David and Lorrie's boys were getting to that age where they began to marry. There was an ample supply of concrete block and cement, so Jim and his men put in more basements and Ron bought more used doublewides. Gary dug into his supply of spare computers and telephone equipment and eventually every home was online.

As a whole, the world was in one hell of a sorry state. The cessation of the Gulf Stream flow produced a severe winter in Europe during the season that followed and the next year was even worse. News became a limited commodity as more and more countries closed their borders. And, the winter of 2011-2012 had been hard, but the winter of 2012-2013 was even harder. Soybean production fell to barely 30 bushels per acre and corn yields fell to around 100 bushels per acre. The new Alaskan oil field was open and the new President, a Republican, tried to stimulate the economy by maintaining an artificially low price on petroleum products.

Conversely, there was some good news, too. Snowfalls in the northern climes reduced the water shortage but the cold weather limited the growing season. The farmers adapted as best they could by planting the varieties with the shortest growing seasons. However, those varieties had marginally lower yields and the cool summers didn't really provide for the best growing season. Canada was beginning to experience significant

problems with their agricultural production. In the US, however, things weren't nearly so bad, yet.

Spring, 2013...

"Well, we need to decide what to plant pretty quick," Ron said, "We will be able to get in the fields in another month and frankly, I have no idea what to plant."

"If it were I making the decision," Gary proposed, "I would only plant enough soybeans to produce enough oil and meal to meet our needs for a one year period. We can also plant enough corn for alcohol and livestock feed. In terms of our gardening, we should probably not plant more than we can eat in one year, maybe less. We can't store those canned goods indefinitely and we didn't get back but half the jars from the excess food we sold off. We definitely need to increase the amount of pork we market Ron, there's such a thing as having too much of a good thing. The same goes with the beef. In my humble opinion, we can sell off all of the beef and pork we have that is at market weight. We need grow oats and fill the third silo and order an oats roller, too."

"I see that there's a little water flowing in the Colorado River according to the news," Clarence commented. "That should help reduce tensions with Mexico."

"And from the sounds of things," Gary added, "It would appear that the US and Canada are finally going to be able to bury the hatchet and resume some sort of diplomatic relations."

"It does sound like that problem is going to resolve itself, Gar-Bear," Ron agreed. "But I don't like the total news blackout from around the world. For all we know, there could have been a nuclear war and we wouldn't know a thing about it."

"I hope that we didn't outsmart ourselves," Gary remarked. "LTA is pretty well off. Maybe we should open up this community to expansion and invite other people to move in."

"I'm not opposed to that Gary," Clarence responded, "But what would the people do? There's only so much work here on the ranch and we aren't particularly short of help."

"Well Clarence," Ron butted in, "It's not so much that there is work for them as there's safety in numbers. Let's face it we can produce enough food for a small army, hell, maybe even a medium sized army. Money is no problem and I'll bet if we put Jack on it, we could acquire enough additional weapons and munitions to equip that small or medium sized army."

"Oh, I'm sure we could Ron," Gary agreed, "But what I'm suggesting will create problems in and of itself. What is the carrying capacity of our electrical system?"

"Those wind turbines produce about 1.3 megawatts at peak capacity Gar-Bear and the wind sure as hell is blowing enough so we're at peak capacity all of the time," Ron re-

plied. "What we haven't done is increase our battery capacity to match the capacity of the wind turbines. Right now, we could only produce 1.3 megawatts for 12 hours from our batteries. I guess we'd better see about doubling our battery bank."

"We'd better put in a second generator too, Ron," Clarence suggested. "Even if we double our battery bank, that won't help much if the wind dies down for more than 24-hours. But, you didn't really answer Gary's question, how many homes can we support with 1.3 megawatts of power?"

"Well, do I look like an electrical engineer to you?" Ron snickered. "Figure that most homes are only using maybe 75 or 80 amps at peak usage. That generator puts out around 900 amps if I remember correctly and it is equal to one wind turbine. So, the generator will handle the peak usage of roughly a dozen homes. Now, unless I'm miscounting, we have 21 homes here, the original 9 basements plus the additional 8 basements plus the 4 we put in for David's boys. That means our demand is between 1,575 and 1,680 amps, give or take. Our capacity must be on the order of 1,800 amps so we're going to need to add another wind turbine, 2 additional battery banks and 2 additional generators before we can even consider opening this place up to expansion."

"That will only give us capacity for about a dozen more homes Ron," Gary said. "You didn't count in all of the electricity used by the other operations on the ranch. I'm guessing that we're already at 100% capacity. Maybe we need to add 4 wind turbines, and 5 generators and only count on the battery bank for a few hours."

"Wouldn't we be better off with one big generator?" Clarence asked.

"Not at all, Clarence," Gary suggested, "Generac had that modular generator setup and even though we'll probably be using the Cummins generators, the idea is the same. You only run as many generators as the electrical demand requires."

"Well, if we're going to increase the population, we'll need to increase the carrying capacity of that septic field and perhaps even think about putting in another well," Ron surmised. "I'm game, but I just hope this whole thing doesn't get away from us."

"I suppose that it all comes down to money Ron," Gary observed, "How are we in that department?"

"We have about \$1.5 million and we can sell off about \$300 thousand worth of biodiesel and about \$500 thousand of soybean meal," Ron calculated. "So I guess we have as much as \$2.3 million available if it comes to that."

"Let's start with the wind turbines, partner," Gary suggested. "After we get them installed, we'll see where we stand with respect to money to put in the generators."

"That don't make lot of sense Gary," Clarence contradicted. "We need to put in a generator first and then add a generator and a wind turbine one pair at a time."

“You’re right of course,” Gary admitted, “I don’t know what I was thinking. With thinking like that, I’d probably have built a brick wall around the entire US.”

o

Cummins Power wasn’t exactly selling a lot of generators in 2013. They took to the order like a fish to water and when Ron told them he’d take 3, they offered to deliver and install the units. Wind turbines were an entirely different matter and but for the fact that LTA already had 2 turbines and a large cache of parts, the manufacturer probably wouldn’t have even talked to Ronald. Sensing that he’d better take advantage of the situation, Ron ordered 4 wind turbines and a large supply of repair parts. After their discussion the men had checked the electrical distribution panel and meters and discovered that they were in fact occasionally pulling power from the utility to meet their needs. Ron may have gone with 6 turbines, but that would bite too deeply into their available funds. Realizing that he was short on generators as compared to turbines, Ron called Cummins back and ordered 2 more generators. The salesman also recommended some auxiliary equipment to permit the modular activation of the generators and offered free delivery and installation of that equipment as well.

This whole proposition of revising their electrical capacity, took a big bite out of the apple, as it were. Ron was trying his best to think ahead, however and it came to him that they’d better produce as much corn and soybeans as the farm had capacity this year. They could always sell off the excess, but if they had 6 generators that they might end up feeding, 60,000-gallons of biodiesel wasn’t enough by any means. At 100% capacity, he seemed to recall, 6 generators would burn up something on the order of 300-gallons of biodiesel per hour. Those 60,000-gallons would only last them on the order of 200 hours or about 8 days. A 60-day supply of biodiesel for the generators meant that they would need close to ½ million gallons of biodiesel. They were going to be out of the biodiesel marketing business for a long time, that much was certain.

The only size underground fuel tank that was readily available was the 12,000-gallon tank. And they were about the most cost effective size. Every tank he added would extend their carrying capacity for 40 additional hours at full power. Ron looked at the money situation carefully and realized that he could get by without selling off the 48,000-gallons of fuel. That would put them a step up for sure and if he could start adding the 12,000-gallon tanks staying just ahead of Derek and Jason, it might work out ok.

In addition to putting in the 4 additional wind turbines and 5 additional generators and auxiliary equipment, Ronald was able to afford to add 5 12,000-gallon fuel tanks and expand the septic system. However, that left them without additional residents because time ran out before they could put in any additional basements. There was always 2014 and perhaps during the next year, living in a survivalist oriented community that had free/cheap electricity and water and the like would appeal to more people and allow them to be selective about whom they invited in. It was probably just as well that they didn’t get the chance to put in those basements; they didn’t have enough phone or

computer equipment to properly equip each home anyway.

By the time the fall of 2013 came Ron, Gary and Clarence were almost anxious to sit back and catch up on their rest. The soybean crop had turned out to be pretty fair, considering, yielding 32 bushels to the acre and the corn also remaining at the 100 bushel per acre mark. The oats silo was half full. They had used the last of their jars in the canning process and Ron had ordered half a railcar load. These jars and the extra lids he bought were going to be their reserve supplies. Although selling off the extra canned goods had allowed them to resolve their food inventory problem, it had eaten up their supply of extra jars. The three of them made it a point to get to the range once a week and on this day they were down at the pond with a line in the water.

“You know Clarence,” Gary announced, “I’m sure happy you put walleyes in this pond. With as cold as the water is, they’re pretty darned good eating.”

“I thought you didn’t like fish,” Ron quizzed.

“Ronald my friend,” Gary smiled, “As a rule I don’t, but there’s nothing better than a fresh walleye fillet out of cold water cooked in a beer batter.”

“Well for goodness sake,” Clarence said, “We’re going to have to go fishing every day while the weather holds out.”

“You don’t want to eat no darned fish Gar-Bear,” Ron chuckled.

“Why not Ron?” Gary asked.

“Cause it’s good for you and you wouldn’t want to break your perfect record of never eating anything that was good for you,” Ron laughed.

“It’s fried fish Ronald and the grease isn’t so good for you so I think my record is intact,” Gary laughed back.

“What are we going to do about adding residents now that we have our infrastructure expanded to handle 3 or 4 dozen more families?” Clarence asked.

“Partner, I’ve been thinking about that on and off all summer,” Ron replied. “With the new wind turbines, we’re back in the black as far as our electrical exports go. And although we won’t be selling any biodiesel for the foreseeable future, we’re going to have plenty of soybean meal to sell. Ergo, money won’t be a limiting factor. In my opinion, we can afford to be careful about who we let into LTA. We can be specific about the type of homes they put in, too. Linda and I still own the land even if it’s in the name of the corporation. This is a working ranch, not an open community. Our three wives and us will vote on each prospective new family and only accept families that we all agree on. That might seem to be biased or something, but it is pretty much a private club here and it is private property.”

"I suppose you're going to let more of Clarence's kind in," Gary remarked, a twinkle in his eye.

"What do you mean by my kind?" Clarence snapped, "I nevered knowed you was prejudiced Gary."

"Your kind Clarence, moderate Republicans," Gary laughed, "You're sometimes almost liberal."

"Me liberal?" Clarence laughed, "You have room to talk!"

"Well, I'm glad we got that out of the way," Ron joined the laughter. "Sometimes I worry about the two of you."

"I don't have a prejudiced bone in my body," Gary said, "Unless your name is Udell or Carrie or Jolene or Kathy."

"You forget Marie."

"She died of cancer."

All About the Weather – Chapter 15 – Strange Bedfellows

Misery acquaints a man with strange bedfellows, or so said Shakespeare in *The Tempest*. As a whole, Europe was miserable, Asia was miserable, Africa was miserable and South America was miserable. North America was more than just miserable, if such a thing were possible. When the second Alaskan oilfield was opened and the US finally had almost enough oil, no one really wanted it anymore. A whole lot of people had disposed of their gas guzzling SUV's and had gone with anything they could find that was diesel powered. And then, they had begun to produce their own biodiesel from any kind of oil they could get that they could afford. Canada and Mexico had ample supplies of petroleum products and they weren't interested in buying the excess US production.

When water began to flow from the Colorado River, Mexico sent additional representatives and these individuals followed the Colorado River to its headwaters at La Poudre Pass and realized that the US had not been withholding water. To tell the truth, both Mexico and Canada had a problem in winter of 2013-2014. Canada's agricultural output had fallen dramatically and Mexico was inundated with its entire population. In an unparalleled diplomatic move, the US installed gates every ten miles along those fences and threw open the gates, inviting both Mexican and Canadians into the US without Passports or Visas. One thing led to another and before the summer of 2014 was over all three countries formed an alliance and began to refer to themselves as the United States of North America (a political version of NAFTA, called NAA).

This stunning reversal in the policies of all three nations did not go unnoticed around the world. It wasn't a new government by any means, but it was a confederation that perhaps spelled trouble for the remainder of the planet. Great Britain was quick to seize upon the situation, what with Canada being a Dominion of Great Britain and the United States being Great Britain's wayward child. Great Britain, Canada and the US had common roots and were quick to join in an alliance. Mexico, fearing the possible repercussions if it objected, hesitantly went along. The new alliance adopted an old name, the North Atlantic Treaty Organization. Well now one can imagine the consternation that the new organization caused among the Europeans. Not surprisingly France declared war on Great Britain.

People in the US had gotten tired of calling their French fries American fries because American fries were pan fried sliced potatoes and the Americans had their belly full of France and most everything French. The US frequently produced better wines than France and California could produce any cheese the French exported. About the only folks in the entire US that didn't want trouble with France were the people at Walt Disney Company and only then because of their ownership in Euro Disney. However little was said when a flight of 20 B-2 bombers left Whiteman AFB bound for France. Perhaps because the mission was Top Secret, or perhaps because no one cared anymore.

Honoring its treaty obligations to Great Britain, the United States of America showed those French folks what French fries were really all about. The largest nuclear weapon in the US arsenal was the B-83 1.2-megaton bomb and a B-2 held 16 of the weapons.

288 1.2-megaton nuclear weapons dropped on a country the size of France turned most of the population into crispy critters. Now let the French talk about French fries all they wanted, they had personal experience with the subject matter. That was darned near the shortest war in history. Barely 12 hours after France declared war and threatened to nuke the British Isles 18 B-2 bombers were on a heading of 300 degrees, headed back to the Whiteman Air Force Base (only 18 B-2s are nuclear capable).

Around the world a hue and cry was raised about the American adventure, but it wasn't the loudest hue and cry. According to Global Security dot Org the US still had 300 of the B-83 bombs and a whole lot of missiles. The several countries around the world that belonged to the nuclear club had problems of their own and really didn't want to get involved, at least for the moment. Of all the countries harshly hit by the abrupt change in climate, Russia was feeling the most pain. And, there were a whole lot of countries easier to handle than that new North American Alliance. There aren't many people of color in Russia, in case you are unaware and Russia decided to help themselves to Africa. Now, the only country in Africa that belonged to the nuclear club was Egypt and a few, very few as it turned out, well placed missiles took care of that problem.

Many of the other Arab states had been at odds with Egypt for a long period of time and they prudently decided not to take on the might of the Russian Republic. To counter any possible threat from European countries that might be eyeing the Russian resources, the Russians sent the Europeans a clear message. The balance of the Russian missiles, or so they claimed, were targeted on Europe and Europe had darn well better look somewhere other than Russia for salvation. It was a bluff of monumental proportions, only $\frac{1}{3}$ of the Russian missiles were actually targeted on Europe, but the Europeans weren't taking any chances after what Russia had done to Egypt and the US had done to France.

o

In eastern Arizona, the three old men nearly laughed themselves silly when the news of the preemptive strike on France was revealed. None of them had ever been to Paris nor much cared for imported cheese nor drank. France had been a thorn in America's side since WW II and Ron, Gary and Clarence were amused, but generally ambivalent. They had problems of their own to deal with there on the ranch. They had planted another crop heavy on soybeans and corn, planning on increasing the supplies of biodiesel. Of the 40 some families that had responded to their ads in newspapers, only 12 of the families had panned out. It was easy to sort out the card-carrying liberals; all you had to do was to walk into the room carrying an M1A rifle. That had immediately eliminated half of the applicants. Then it became a matter of eliminating those folks who had absolutely nothing to add to the ranch. In the end, 12 families made the cut and Jim and his men had their basements done and more besides.

Realize that although the three men were Christians, they didn't want any Bible thumpers among their ranks. Everything had to be in moderation and that included one's religion. They did admit a Presbyterian Minister and his family. But at the same time they

made it very, very clear that the Minister was to minister and not go around trying to drum up business for the Sunday service. They explained that they'd be by for Church when the Spirit moved them but until that happened, the Minister had best keep his preaching to the pulpit. They also made it clear that the Minister and his family were expected to learn to use firearms for their own protection. They didn't expect the Minister to carry a gun any more than the doctor and dentist did, but they did point out that God helps him who helps himself. Ron was generous in this instance and paid for the pastor's home.

By the end of summer, which came early in 2014, Jim and his men had 24 of the proposed 36 basements finished in every respect. Jack had put the word out that he was in the market for an additional purchase, but so far hadn't heard anything and there was no news concerning armory break-ins. They actually had enough weapons to get by, but by the time they had all 36 homes filled, it would probably be a different story. The soybean yield came in at 29 bushels per acre and the corn at 95. Good old Mother Nature was putting the crimp on their production.

Gary found himself in the market for more computers and a backup server, just in case. They got in touch with Dell and placed an order. The computers that they had purchased earlier from Dell had been Dell's top of the line models. The new computers, however though identical in every respect were now Dell's bottom of the line models. They didn't get much of a discount on the equipment, but the price had fallen so sharply that the purchase cost far less than before for exactly the same equipment. Dell seemed to want quite a premium to set the equipment up too, but Gary knew the secret words (Gateway/Sun) and suddenly the installation prices became far more manageable. Not surprisingly, the cost of that T-1 line gradually diminished over the years and it was down to an affordable \$249.99/month.

"I want a new computer, Gary," Clarence insisted.

"Does your old one still work Clarence?" Gary asked.

"Well, yeah, but I want a new one," Clarence continued to insist.

"Why? The new ones are the same as the old ones," Gary insisted.

"Just 'cause," Clarence said.

Gary took Clarence's old computer, cleaned it up until it shined like new, cleaned and defragged the HDD and returned the computer. Clarence was beside himself with joy at having a new computer and Gary explained how hard it had been to transfer all of Clarence's files. Clarence wanted shiny, not new and that was easy to accommodate. Gary just had to remember that you could only fool some of the people, some of the time. Clarence wasn't fooled, he knew the serial number of the computer, but he had conned Gary into cleaning up and defragging the HDD and cleaning the case. They had both pulled one off on the other and neither had any idea.

Labor Day, 2014...

It seemed a lot more like Thanksgiving than Labor Day. As it was, the corn and soybean were the shortest growing variety available. That probably explained, in part at least, why the yield had fallen as it had. If the climate continued to deteriorate, they would probably end up harvesting the beans and corn in the snow next fall. Derek, Jason and Jeremy were back to running the biodiesel operation 24/7 and Josh was making the alcohol. During the summer they had managed to sell off all of their excess livestock and that meant that they'd probably have a little extra soybean meal to sell, despite the reduced harvest. CNN had reported an armory theft the night before and the three old geezers wondered if that meant that they would soon be rounding out their arsenal. Jack already had acquired the M4-FA suppressors and all he needed was the M16A3's to mount them on. He also had acquired another 48 of the M4-FAs with the quick detach mounts and Ronald had picked up another 48 of the MIAs. They were all equipped and tucked away in the armory/kitchen.

About the only cheese that Gary was fond of was pepper cheese and that didn't mean pepper jack either. Gary liked jalapeno Havarti, but out in California, it wasn't pepper cheese if it wasn't pepper jack cheese. The subject came to mind because when he thought of the kitchen, he naturally thought of the cheese making operation, which got him to thinking that now that they made their own cheese; he should finally be able to get what he wanted. The way they did it in Wisconsin was to heat the Havarti until it was smooth and creamy and add the chopped up jalapeño peppers. You must know how it is, right? There are all of those foods that are so regional like the breaded pork tenderloin sandwiches in the Midwest. Hopefully they'd attract someone to LTA who knew how to cook Midwestern style. Gary would die a happy man with a hunk of that Havarti pepper cheese in one hand and a breaded pork tenderloin sandwich in the other.

And what, you might ask do Havarti pepper cheese and breaded pork tenderloin sandwiches have to do with surviving in Arizona in 2014 when it's snowing on Labor Day? Well, people need a reason to survive, especially when it becomes about 10 times harder to survive than to just lie down and die. And in Gary's case all it took was his thoughts of his sandwich and cheese and the knowledge that his personal armory now included most every gun he ever wanted to own including those M82's. Except, Gary discovered that as good as it was, several other rifles beat out the Barrett M82A1M. The McMillan TAC-50 equipped with a Nightforce day scope and MUNS night scope came to mind. Gary was 71 years old and he'd lived longer than he'd ever thought possible. And until he was comfortable with the notion that he'd done everything in his power to assure that Sharon and his children would survive, he had to hang on. And if hanging on meant thinking about breaded pork tenderloin sandwiches and some Havarti pepper cheese then so be it.

o

Ronald had his own demons to fight. If he just knew where Kevin and Scott were he'd

feel a whole lot better. They had seemingly dropped off the face of the planet. Ron was concerned about Scott and Linda about Kevin. He felt that they were ok, but it was the not knowing that was eating at him. John hadn't indicated that he had any idea where Kevin was and John didn't even know Scott, other than by name. But, there had to be some way to find out. The only war going on in America at the moment was the battle with Mother Nature and the only bullets flying so far were sleet and snow and the cold. Ron decided that a trip to the County Sheriff's office was in order. Maybe if he explained his problem and gave them the info on his two boys, they could run an NCIC check or something.

So, on the day after Labor Day, Gary, Ron and Clarence set out for the Navajo Country Sheriff's office in Holbrook. He carefully explained his problem to the Sheriff and asked if there was anything the Sheriff could do to help him. The Sheriff was an obliging fellow and he offered to run the boys' SSN's through NCIC just to see if that would help. Kevin's SSN brought up an immediate hit; he was in prison convicted of drug dealing. Scott's SSN showed him to be in federal prison convicted of bank robbery. The Sheriff had by this time sort of lost his sense of humor. Ron explained that he had no complaint; if they were locked up he had no doubt that that was where they belonged. He went on to explain that Scott surely had received what he deserved; he'd already served an 8-year term for bank robbery and apparently hadn't learned anything from the experience. The Sheriff wasn't quite used to the idea of a parent who didn't seem to mind that 2 of his kids were in jail. He was even more surprised at the genuine gratitude that Ron seemed to express.

One thing led to another and before long the three men were engaged in a conversation with the Sheriff talking about LTA and their growing small community. The Sheriff had noticed that Gary had a Ruger Vaquero strapped on and that Ron and Clarence had what appeared to be M1911s in those military flap holsters. In Arizona, except for certain exceptions, it was legal to walk around with a handgun so long as it was not concealed. The Sheriff allowed as how he'd like to see this ranch of theirs, it behooved a Sheriff to be familiar with settlements in his community. Come on over Ron told him and we'll put together a pot of real Mexican chili. (Assuming Maria would make it.) Linda was less than overjoyed that Kevin was in prison, but at least he was alive and presumably safe. She was a little snippy about Scott, suggesting she'd told Ron so. Well, you can't win them all, now can you? The way Linda was acting, it was almost as if there were a brick wall between them.

All About the Weather – Chapter 16 – Bad Timing

Jack finally got that phone call he'd been expecting. The guy had 60 M16A3's, several cases of magazines and 75 900-round cases of 5.56 ammo. Jack only had 48 of the M4-FA suppressors, but he could get more so he bought the entire package. Everything would fit into 2 pickups and Jack had the seller meet him at the storage warehouse. Some money exchanged hands and some very warm merchandise went from a U-Haul truck to the storage locker. As soon as the seller was gone, Jack waived the cousins over and the 4 of them began to load the two pickups. They made it back to LTA without difficulty and had the pickup with the rifles and magazines unloaded when who should pull in but the Sheriff, looking to look around and to eat that bowl of chili. Jack never missed a beat; the cousins and he just kept unloading that ammo onto a two-wheeler and hauling it into the armory. The Sheriff sort of tailed along behind and short of shooting him, there was nothing they could do.

"Wow, Jack, I'm impressed," The Sheriff said barely suppressing a whistle.

"I am a Class III dealer Steve," Jack told the Sheriff.

"Yeah right Jack," Steve (the Sheriff) replied. "And I suppose all of those suppressed M16's and suppressed MIAs are your inventory, right?"

"Well..." Jack hesitated.

"And of course, they've changed the laws to allow Class III dealers to possess LAW Rockets and is that C-4?" Steve replied.

"It's C-4 and they haven't changed the danged laws and you know it Steve," Jack responded.

"How many weapons do you figure there are in this armory of yours?" Steve asked.

"Well, not counting personal weapons, I believe there are 96 suppressed MIAs and 108 M16's," Jack replied. Then there are the M203's on a dozen of the M16's plus one hell of a lot of M67's, MK3A2's, 40mm HEDP rounds, the LAW Rockets and several hundred thousand rounds of ammunition. Oh, I almost forgot, we have a couple of Ma Deuces and a half dozen M240s, too."

"You forgot the C-4," Steve smiled. "I presume you have enough detonators for that C-4, right?"

"I expect so, yes," Jack replied. "And mines, Steve, we have a bunch of Claymores and M-14 and M-16 mines."

"Is the M-16 the one they call the Bouncing Betty?" Steve asked.

"It's a bounding mine, so probably yes," Jack replied.

"Well, Jack that's one hell of a lot of explosives you have," Steve winked, "You best be darn careful with them cause if the wrong person gets hurt, you're going to jail partner."

"That's it?" Jack stammered, "Be careful?"

"You darned right be careful," Steve replied, "Have you ever seen what one of those bounding mines does?"

"Can't say as I have no," Jack replied.

"Well, I'll tell you what they do partner," Steve said, "The poor dumb SOB who trips the thing causes it to jump up waist high or higher and then the dang thing goes off and kills or wounds anyone in a 30-yard radius. It depends on which version of the M-16 mine you have."

"They're all A2's Steve," Jack admitted.

"Just frigin lovely," Steve replied. "Like I said, the wrong person gets hurt with any of this stuff of yours and you're going to jail for a long time."

"No you're under arrest or I have the right to remain silent?" Jack said, shocked. "What the hell is with you Sheriff?"

"In the first place, I'm the Sheriff, not the ATF. In the second place what makes you think I haven't known about all of your illegal gun business since before I took office?" Steve replied. "Every time I hear about another armory heist on the east coast, I half expect to see a bus load of ATF fellas to show up."

"We take pretty good precautions with this stuff, Steve," Jack noted.

"I can see that Jack. I presume that all of this stuff belongs to LTA, right?"

"Yep. It certainly does Steve."

"I'm retiring after the November election," Steve said, "Do you suppose that this bunch of fellas might let the wife and kids and me move in?"

"Who is going to be the new Sheriff, Steve?" Jack asked.

"I sort of figured on throwing my support behind Milt," Steve answered, "If it was up to him, they'd repeal every flippin' gun law in the country except for the 2nd Amendment."

"I'll have a talk with the fellas Steve," Jack responded. "Why don't you have the three old geezers show you around the ranch?"

o

Steve did just that and never once did he mention the arsenal the old guys had built up. Now many might consider Steve to be a bad Sheriff, considering what he'd just discovered, but Steve watched the nightly news and he was firmly convinced that this climate change was going to get one hell of a lot worse before it ever got better. He was equally convinced that Mexico couldn't be trusted and that sooner or later someone would invade the US to get what the US, Canada and Mexico had. Assuming, of course, that someone other than Mexico invaded the country. He figured that if he wanted, he could probably get 2 or 3 more terms in office, but he'd rather not be in office when TSHTF, thank you very much. Milt knew the score anyway, that was where Steve had become so well informed about Jack and his illegal gun business. And, Steve wasn't about to build a BRICK WALL between himself and the fellas who might just prove to be his salvation.

"You know what fellas?" Clarence asked, "What we need around this place to brighten it up is an official singer and an official song."

"Say what?" Ron replied.

"I said we need an official singer and an official song," Clarence repeated.

"Who did you have in mind Clarence?" Gary asked.

"Miss Lena Horne," Clarence smiled.

"Figured it would be a black singer, huh, Gar-Bear?" Ron chuckled.

"Ah, I support Clarence on this Ronald and I know what song he has in mind," Gary grinned.

"You gonna let me in on the secret?" Ron asked.

"Nah, you can figure it out yourself," Clarence winked at Gary.

Jack entered the office where the three old geezers were sitting.

"Fellas, I have some good news and some bad news," Jack grinned, "What do you want to hear first?"

"This is going to be one of those days, I just know it. First we have an official singer and a secret official song and now you have good news and bad news Jack?" Ron groaned. "Well what is the bad news?"

"While we were unloading the pickup with the ammo the Sheriff pulled in," Jack ex-

plained.

“Big deal, he saw you unload some military surplus ammo,” Ron said.

“And he followed us into the armory and saw all of the weapons we have,” Jack continued.

“All of it?” Ron groaned.

“Every single bit, Ron,” Jack acknowledged.

“How can there be any good news?” Ron asked.

“It seems that our good Sheriff plans on retiring and wants to move into LTA,” Jack smiled.

“Probably so he can get the serial numbers off all of those stolen weapons before he arrests us,” Ron pitched.

“Apparently he couldn’t care less about the weapons, Ron,” Jack said. “He claims he’s known about my activities since before you fellas even moved to Arizona.”

“So, we get a new Sheriff and he busts us. How does that improve our situation?” Ron continued.

“The new Sheriff is likely to be his chief deputy and apparently Milt couldn’t care less about illegal firearms,” Jack explained.

“Do you believe that? Bull,” Ron snapped.

“I know Milt and as a matter of fact I do, Ron, yes,” Jack replied.

“Well tell the Sheriff he’s our new Chief of Security and as an employee his house is free,” Ron said, “But I’m only going to pay him \$8 and hour same as everyone else.

“And the darned mystery song is ‘Stormy Weather’, Gar-Bear,” Ron shook his head.

o

Ron had that right in more way than one. It was still September and the snow was beginning to fall like they were in Alaska. And within hours, they had a good six inches on the ground and if anything the snow was getting heavier. Ron went to find the cousins to tell them to take care of the livestock but they were way ahead of him. He went back to the office and about that time an alarm went off signaling that the wind turbines were being automatically shut down because the wind was blowing too hard. The batteries immediately picked up the slack and the three men went to check on the batteries. They

were fully charged, but since they'd never bothered to increase the battery bank, they only had in theory 4 hours, but possibly 5 on the battery bank before the generators started to kick in.

So the men went to check on the generators and Jed, the mechanic, was already checking them over to make sure they'd kick in without a problem. There were 2 12,000-gallon tanks of biodiesel in the basement with the generators (a new addition-2014). They had added 5 underground tanks in the spring of 2013 and filled them with the processed fall of 2012 biodiesel and 5 more underground tanks and the 2 basement tanks in the spring of 2014. The 2 basement tanks and 3 of the new outside tank were full, meaning that they had 15 x 12,000-gallons of biodiesel available. That was only enough for 600 hours at full load, or just shy of a month's worth. If they could cut to ½ load, e.g., full load on 3 generators, they could stretch that to between 50 and 60 days.

Now, several things were working for them and one thing was working against them. They had made an error with respect to the generators; they put out the same amount of power as the wind turbines, 675-680kw but that was 850 amps, not 900 amps or even 938 amps which was the standby rating of the generator. On the other hand, they had only filled 12 addition homes so their draw was for 33 homes at a peak load of about 75 amps per home or a total of 2,475 amp hours. Three generators put out 2,550 amp hours and to keep everything operating including the out buildings, they would need to run 4 generators or severely curtail the home usage. That was an iffy proposition at best given the blizzard they were experiencing. On the other hand 4 generators were 200 gallons per hour and that meant that they actually had 900 hours of power or 37.5 days at full load for the 4 generators. If push came to shove, they were going to have to move everyone to the underground shelter and only keep the homes warm enough to keep from freezing.

And of course, as anyone could tell you, in the middle of a blizzard, a satellite TV system wasn't worth the powder it would take to blow it straight to hell. To top the whole discussion off, they could only produce 85x6=520 gallons of biodiesel per 24-hour period. Ron picked up a phone, the lines weren't down yet, and called the Sheriff's office in Holbrook. Did the office have any kind of estimate how long the storm was expected to last? Maybe 3 weeks, Ron was told.

That did it; everyone was instructed to turn their hot water heater to the minimum temperature setting, their furnace thermostats to 55 degrees and head for the shelter. LTA was going into survival mode. In the shelter they could cut the generator usage from 4 to 1, essentially quadrupling their time to 150 days. The underground shelter had been fully stocked when they'd set up that armory in the former corncrib and it was underground with an ambient temperature in the mid fifties. If everyone bundled up warmly, what little heat they might need would be a byproduct of the cooking process. They had contingency plan upon contingency plan and by implementing their last resort plan immediately they could get through the winter.

All About the Weather – Chapter 17 – Stormy Weather

The blizzard lasted and lasted and lasted. The cousins had to leave the relative comfort of the shelter twice a day to check on the livestock and Jed went with them to check on the generators. And, it was a darned good thing the 9' Indian wasn't around or he'd have been in snow up to his chin. Jed started a process of rotating the generators, switching from #1 to #2 and so forth. The preservative they'd been adding to the bio-diesel had the added advantage of reducing the tendency of the fuel to congeal (gel) and they were experiencing no problems with the underground fuel.

"Well, guys we seem to have a major problem here and I think that we're going to have to re-think what we're going to do this coming summer," Ron offered.

"What's that Ron?" Clarence asked.

"We only had an inventory of 180,000-gallons of fuel and there's no telling what is going to happen this winter," Ron explained. "If we end up spending all winter in this emergency shelter, and the wind blows too hard for those turbines, we'll be out of fuel come spring. To top it off, we have a limited capacity to process the soybean oil."

"The answer seems obvious to me, my friend," Gary chimed in, "We're simply going to have to plant more soybeans and increase both our storage and processing capacity. We should probably put in 3 more silos and triple the number of biodiesel processing units. I'll tell you something else we didn't think of. We don't have any really good way to get around in all of this snow. Do you think we could maybe find a couple of used Snowcats and buy some snowmobiles?"

"Gar-bear, we're not made of gold here, you know," Ron protested, "I wanted to increase the biodiesel storage up to 480,000-gallons. That means adding another 25 of those 12,000-gallon underground tanks. We can only produce about $3 \times 85 = 235$ gallons of biodiesel per processor even running 24/7 or 765 gallons per day. Now I've done some research on the net and we can go with a large commercial biodiesel production unit, but there is a 2-year waiting period on delivery and they are really a high-ticket item, presuming we could even get one."

"And Gary," Clarence added, "We're already at capacity on the 4 sections of ground we have. It is going to take one hell of a lot more ground to produce the soybeans we need to produce $\frac{1}{2}$ million gallons of biodiesel."

"Now fellas," Gary replied calmly, "I've been doing my research too. I realize that we're not made of money here. On the other hand, there is still a very good market for soybean meal. It's down to \$400 a ton, but that's a pretty good price. As far as processing capacity goes, those small units have their advantages and I'd be willing to bet that we could get a pretty dang good price on them if we bought, oh say a dozen, in a single purchase. Now, if we were running 14 or 15 of those units 24/7, we could produce $15 \times 3 \times 85 = 3,825$ gallons of biodiesel a day. That would mean that it would only take us

about 125 days to produce the entire ½ million gallons of biodiesel. If I recall correctly, we get one gallon of fuel per bushel of soybeans. So, to produce ½ million gallons, we'd need about ½ million bushels of soybeans, not counting the soybeans we'd need to process to provide fuel for our farm equipment."

"Assuming that we can only get about 30 bushels to the acre, we're going to have to plant about 16,000 acres of soybeans this coming year plus about 800 acres of corn," he continued. "All of the adjoining land is BLM land. As far as I'm concerned, when it gets down to a purely survival situation, I have no scruples about borrowing their land for a season or two to produce what we need."

"I don't want to put a pin in your balloon, partner, but those silos only hold about 15,000 bushels of grain," Ron pointed out. "To store ½ million bushels of soybeans until we can process them would mean that we'd need another 29 silos. There is no way we can afford another 29 silos."

"I sort of figured that partner," Gary agreed. "But I didn't assume that we'd necessarily add all of those silos at once. We have other expenses too, like buying another dozen M1A rifles, more farm equipment, the snow equipment and those fuel tanks and so forth. But, if we can get a start on it, we can get a continuous building contract going with Harvestore and our soybean meal sales should keep us going. Like I said, I have no problem borrowing that BLM land for a couple of years."

"Do you think the BLM is just going to sit idly by and let us use 22 sections of ground?" Ron asked.

"Probably not, they're a bunch of buttheads," Gary agreed, "But if we can get the crop in before they catch wind of it, we'll be ok for the first year. I don't expect they'll force us to destroy a growing food crop."

"Planting a total of 22 or 23 sections of ground will take more equipment and people than we have, partner," Ron casually observed.

"Yeah, Gary," Clarence said, "Ron has a point there."

"Yes he does, Clarence," Gary agreed, "And there is no way we can buy all of the equipment we'd need to plant and harvest a total of 25 sections of ground either. On the other hand I'd be willing to bet that there are a whole lot of those custom farmers out there with equipment that they can't afford to run who are just dying for work. I'd even go so far as to suggest that if we supplied them with fuel that they would give us one hell of a break on the price they'd charge to plant and harvest our crops. In the meantime we'll have 24 basements in need of homes once we get the other 12 basements in. And, it might be a good idea if we filled most of those 24 homes with farmers. We could stand to have a fulltime electrician and a fulltime plumber, but that would leave 21 homes to fill with farmers. Don't forget fellas, we have to use one of those homes for our new Chief of Security and his family."

At least they had a plan for the spring, summer and fall of 2015. But first, they had to get through what was left of 2014. They weren't exactly sitting on a vault full of money, either. But, as soon as they could get back to processing those soybeans, they would be replacing their precious supply of biodiesel and producing soybean meal that they would be forced to sell to raise money for their expansion efforts. Just when it seemed that they had everything well in hand, up popped cousin Murphy and he seemed to have brought along his entire family. On the other hand, this was a darned good test of their worst-case scenario. And that Minister seemed to be related to the preacher that George S. Patton had used to pray for good weather so he could go kill more Germans about 70-years earlier, his grandfather perhaps? Anyway the storm let up after 2 weeks and the wind died down to a point where the wind turbines kicked in and the generators shut down.

By the time the first snowstorm of the season was over, there was about 6' of snow, depending on where one looked. Some of the drifts reminded Gary of when he'd lived on that farm north of Green, Iowa back in '48 or '49. But, they had the tractor with the blade and loader and by Thanksgiving, they had LTA dug out and were able to get to Winslow and Holbrook. Steve already had located a home and was chomping at the bit to get moved to LTA. Milt had won the election for Sheriff so it seemed that their firearms and munitions weren't going to be a problem so long as they didn't blow someone up. It proved to be a daunting task getting Steve's doublewide installed on the basement, but they managed. About the first thing Ron did was to contact the manufacturer of those biodiesel processors and he got 13 of the units for \$2,100 each FOB point of origin. They also decided to grow canola aka rapeseed because it was grown in Canada. Canola produced 127 gallons of vegetable oil per acre and with a biodiesel yield of 80%, that's 102 gallons of biodiesel per acre.

Despite having to deal with all of the snow, Jim and company scraped off the snow and used portable biodiesel powered heaters to thaw enough ground to erect a rather large, new steel building. The new biodiesel processing equipment was installed and set to operating and then they moved the old equipment plus the still and mash barrels to the new building. The building was, in fact, large enough to handle another 15 biodiesel processing units and 3 more stills plus a 12,000-gallon tank devoted to alcohol storage and 2 12,000-gallon tanks devoted to storage of the glycerol waste product.

The only problem that left them was a place to store the biodiesel they were cranking out from processing the 2014 crop. More scraping and a backhoe created the underground pit for the tanks and using money earned from the sale of the canola meal, Ron was able to acquire 25 additional 12,000-gallon tanks. It was darned tough work, the wind-chill factor being what it was, but they got the 25 new tanks installed and plumbed together. Then, they had to run every portable heater they had to thaw the frozen dirt from the excavation so that they could cover over the tanks. But by Valentine's Day, the entire project was done and using the new processors, all of the soybeans had been processed, the oil converted to biodiesel and the meal sold.

o

With their fortunes somewhat repaired due to the sale of the soybean meal, Ron contacted Harvestore and arranged for a contract for the new silos. Harvestore was more than willing to work with him in view of the number of units he wanted. In fact, they even offered partial financing, allowing Ron to plan for 15 of the 29 units to be installed during the summer of 2015. Jack acquired the 12 extra M4-FAs and another 12 FA762F. Ron purchased the 12 additional MIAs and Gary was busy talking to people he knew in Iowa about where to find some people who could handle putting in all of those canola beans. Along the way, Gary ended up talking to the company in Iowa who had a new variety of canola bean. The new plant had a very short growing season, relatively speaking, was expected to yield about 120 gallons of oil per acre. The seed producer was more than willing to work with the folks at LTA on price if they would keep records for the producer. It was to be his final test crop before he brought the new variety to market.

It turned out to be pretty easy to find people willing to do the custom farm work when the subject of LTA providing all of the fuel came up. An overwhelming portion of the costs for the custom farmer was the fuel and relieved of that burden, he offered a handsome price for his work. Although winter had started early in 2014, the spring of 2015 also seemed to come a bit early and the custom farm operator had his people and equipment in Arizona clearing off the chaparral before the snow was even melted off. With so much additional land to irrigate, Ron contracted for a 12" well on several of the sections of ground and the well driller worked overtime to put in the additional wells.

Sooner or later, the BLM was bound to show up and begin raising hell, but the Three Amigos didn't really give a flip. The truth be told, if the BLM showed up and gave them too hard of a time, they were more than willing to use those BLM people to fertilize the corn and bean crops. Having experienced the worst winter in their collective experience, Ron, Gary and Clarence were far more concerned about providing for the residents of LTA. Once the Harvestore dealer got started with his project, he went ahead and put in the foundations for all 29 silos to save him the bother of returning a second time. Jim and company set about installing the last 12 basements and running all of the utilities.

Over the course of the summer of 2015, a lot of families applied for residency at LTA. The three friends selected a journeyman electrician whose wife happened to be a schoolteacher, a journeyman plumber whose wife was a housewife and 9 farmers from the Midwest. The winters in the Midwest, it seemed were becoming very harsh. And the farmers had a suggestion or two to offer. Iowa had been a leader in the production and use of gasohol and although LTA didn't use a whole lot of gasoline, the farm boys suggested that the folks take some of their excess alcohol production and use it to cut the gasoline by 10%. That seemed like a pretty good idea. They only had that small tank of gasoline for Damon's Harley, but in all likelihood, the snowmobiles would be gasoline powered and they were going to need to put in a supply of gasoline.

Ron got Jim and company to excavate a hole large enough to hold 3 of the 12,000-gallon tanks and they installed a second fuel pump, this one for gasohol. Then, Ron got

a hold of the folks that made those PRI fuel additives and talked to them about what he needed to do to provide for long-term storage of gasohol. It seemed that they really didn't think that an additive would do much for the gasohol. So, Ron went looking on the net. One place looked like they had a product with some potential so Ronald ordered a couple of 55-gallon drums of the stuff. If nothing else, the product would improve their fuel mileage and the manufacturer claimed it worked with gasohol.

Fall came and the custom farm operator showed up and started the harvest. Ronald got the biodiesel crew working 24/7 using the 15-biodiesel processors and started to sell off the canola meal as rapidly as the oil was extracted. The influx of cash paid for the gasohol tanks and they were installed and covered over. Then Ron bought 32,400-gallons of unleaded gasoline and had it evenly divided among the three tanks. They then added 1,200 gallons of anhydrous ethanol and the fuel additive to each tank. Although this wasn't the recommended procedure for producing gasohol, Ron had gotten the idea from an ISU pamphlet. Meanwhile, the Harvestore dealer continued to install silos since LTA was generating a significant cash flow and could pay for additional units. The custom farm operator offered to take half of his payment in biodiesel. His fee wasn't that exorbitant and they were producing the biodiesel at around 3,600-gallons per day so, Ron took the guy up on the offer.

Interesting enough, that Iowa seed producer had hit on something. Switch to canola beans like they grow in Canada. Ronald talked to Harvestore a second time and they agreed to front him the silos until the canola meal could be sold. In fact, because winter was fast approaching, they sent in crews from several dealerships and they managed to get the silos all erected just prior to the first snowfall. You may recall that the 29 new silos and the 3 old silos had a total storage capacity of 480,000 bushels. However, the canola oil extraction plant was running 24/7 and it became a simple matter for Ron to have 4 extra 12,000-gallon tanks installed in the biodiesel production building.

By the time everything was completed in the late fall, early winter of 2015-2016, all of the excess production of canola had been processed and converted to biodiesel. The 2 used Snowcats that they had acquired were diesel powered and one had a blade mounted on the front. Derek, et. al had managed to process those canola beans in 46 days and they were well off on fuel, having produced almost exactly 200,000-gallons. The glycerol had been pumped from the tanks on an ongoing basis and disposed of at the county dump. Where, one might ask were they storing the corn they had harvested, since all 32 silos were full of canola bean? Waste want, want not is a pretty good motto and although they had converted the corncrib to an armory/food processing facility, that overhead storage space made the perfect place to store those 8,000 or so bushels of shelled corn.

And as they moved into October of 2015 and that first snow of the season came, everyone was suddenly extremely happy to be living at LTA. The wind came up and the turbines shut down, as they had the year before, but with a Snowcat to keep the roads clear and generators to power the ranch, everyone kept right on working. Admittedly it probably wasn't optimal, but, they had the 72,000-gallons of old biodiesel plus the

246,000 gallons of new biodiesel and they were doing a little better than breaking even on the biodiesel usage vs. the biodiesel production, so they kept on working 24/7 producing more biodiesel.

One of the advantages, they learned to having all of those Midwest farm wives living at LTA was that they brought a batch of new recipes for canning and the ladies were able to add additional variety to the canned goods. They had learned their lessons early on and during the summer of 2015, they only produced enough canned goods to replace what they anticipated that the 54 families would use over the coming year.

All About the Weather – Chapter 18 – Hog Heaven

Where I come from, being in Hog Heaven was about the best experience one could have. And, as the three old geezers got to know those folks from the Midwest, Gar-Bear made some interesting discoveries. It seemed that one of the farm wives, from north-eastern Iowa had worked for a cheese processor across the Mississippi, in Wisconsin. She knew all about making the various kinds of cheese, including the Havarti. She took over their cheese manufacturing operation for them. Gary's mouth started to water at the mere thought of having some of that Havarti pepper cheese. But wait the wife of the guy from the Des Moines area had worked for a restaurant (Millie's) in Des Moines that was famous for its breaded pork tenderloin sandwiches. She'd stopped working years earlier when the restaurant had gone out of business but she surely hadn't forgotten how to make those breaded pork tenderloins. She was given a part time job working with the people who butchered and processed their meat, which was now an internally run operation.

For Thanksgiving dinner Gary was presented with a special treat, a brick of Havarti pepper cheese and a breaded pork tenderloin sandwich that must have extended 3" beyond the Texas sized hamburger bun. You just had to be there to appreciate the scene. Gary had a grin from ear-to-ear. In fact, no one could remember seeing such a magnificent grin on Gary's face, ever. It was almost as if every Hollywood beauty queen that Gary had ever had a crush on had whispered something suggestive in his good ear.

Gary reached out and broke off a hunk of the pepper cheese. He slowly chewed the morsel, clearing enjoying every bite. Was that a tear in the corner of his eye? Then, he began to look around as if something were missing. Just then, Sharon came in, carrying a saucer of those thinly sliced dill pickles you only seemed to be able to get in restaurants and a squeeze bottle of French's mustard. Gary checked his pulse to see if he were still alive and then proceeded to properly prepare that sandwich. A just so amount of mustard followed by a layer of those extra thin dill pickle slices and he was ready to go. By golly, that was a tear, after all.

I guess that Thanksgiving 2015 could be called a success. They had turkey this year, for a change in addition to the standing rib roast and a plate of fried chicken for Clarence. Sharon also had a breaded pork tenderloin sandwich, plain of course, and she really must have enjoyed it too; she was talking a mile a minute in a louder than normal voice. Ronald was content with the 16-ounce slab of prime rib and he didn't waste any time talking about it, he just dug in and ate. There were a variety of special occasion salads, too and for a few hours there Gary felt like he was back home in Iowa.

o

After dinner they broke into groups and sat around engaged in conversation. The three old geezers were talking mainly about the nasty snowstorm they were enduring and the coming crop season. Those canola beans that the seed producer from Iowa had supplied them with were a hybrid and couldn't be used to plant during the 2016-growing

season. Ron said that he'd contact the seed producer and see about getting more of the seed. He did, however, anticipate a problem in that regard. Ron had been following the weather reports all summer long and unless he missed his guess, that seed producer would be hard pressed to come up with more of the seeds. Iowa had experienced a particularly poor growing season during the summer of 2015 and Ron speculated out loud that that seed was going to be 'danged hard to get'.

They also discussed the fact that unless they ended up operating on the generators the entire winter, they wouldn't need to plant nearly as large of a crop of canola and corn. As it was, they would be unable to distribute the canola meal they were producing this winter and they really didn't have any place to store it. Clarence suggested that they just put it back in the silos until spring and they could start selling it off then. As it was, assuming that the storms followed the pattern of the previous year, most of the winter would see them operating off the wind turbines rather than the generators. And if that happened, they could possibly even skip a year's planting of canola and corn entirely.

The storm abated earlier than anticipated and during the following week Ron managed to get a hold of the seed producer in Iowa. It was just as Ron had imagined during their conversation on Thanksgiving, they wouldn't be able to supply them with any of the new hybrid seed for the coming year. One thing led to another and before the conversation ended, Ron had about half talked the guy into moving his seed operation to LTA during the coming growing season. The man, his last name was Garst, said he'd get back to Ron after he'd had a chance to think it over and talk to his people about it. Christmas came and they passed into 2016.

January 17, 2016...

"It this Green?" The man asked.

"At your service," Ron replied.

"This is Garst," Garst said. "How much land do you have available on that ranch of yours down in Arizona?"

"We planted just shy of 25 sections this past year," Ron explained. "I had 12" wells put in on several of the sections so as long as there's water in the aquifer, you should be able to grow crops."

"Is that BLM land?" Garst asked.

"We only have 4 sections of our own Mr. Garst, so 21 of those sections are BLM land yes," Ron replied.

"I'll tell you something Green," Garst replied, "I have more than a few friends in the Department of Agriculture and a fair number in the Department of Interior. Now since you've done some improvement on the government land, if I could get the BLM to deed

those 21 sections over to the two of us, would you be interested in a joint venture?"

"I expect so yes," Ron replied, "But while you're at it, could you get them to deed over the 4 sections adjoining our place directly to our corporation? Those extra 2,560 acres would make all the difference in the world to our operation here and would go a long way towards providing for the long-term survival of our community." (Like an extra ~246k gallons of biodiesel, Ron thought, but didn't say)

"Are all those water wells on those 4 sections?" Garst asked.

"Actually no, Mr. Garst, only one of them is on those four sections," Ron replied, "The other four are spread out at the rate of one well per 4 sections of ground."

"And they're 12" wells, is that right?" Garst asked.

"Yes and they extend to the bottom of the aquifer," Ron explained. "The driller says we have about 350' of water."

"Well, here's the deal," Garst said, "I'll need housing for 36 families with utilities and the whole 9-yards. I can provide work for another dozen men besides my group. I'm willing to pay a fair wage and benefits and I'm willing to cut you in for say 20% of my operation."

"Shall we say 40% of your operation?" Ron suggested boldly.

"So it's gonna be like that, huh?" Garst laughed. "25%."

"30%," Ron countered knowing in his heart that anything he got was just icing on the cake.

"25% and all the seed you need for as long as I'm in business," Garst countered.

"Mr. Garst, assuming that that offer also includes those 4 adjoining sections of ground, you have yourself a deal," Ron smiled to himself.

"It does, Green," Garst replied. "I'll have my people get with your people to work out the details."

"Mr. Garst, I am my people and I don't see what's to work out," Ron said. "We'll have 36 doublewide mobile homes setup and ready by early April for your people and we generate our own electricity and have our own well, so your folks will only have nominal utility costs. And, we can provide you all of the biodiesel you need at a price below wholesale. Plus our population includes 9 Midwest farm families and a bunch of hard working eager young men."

"You talking about a handshake deal, Green?" Garst asked.

“Essentially until your lawyers work out something for us to look at yes,” Ron said. “You don’t screw me and I won’t screw you.”

“You’re not from Iowa, by chance?” Garst softened.

“No, but one of my partners is Mr. Garst and he went to school at Drake Law School,” Ron reported truthfully.

“Ok, I’ll have my attorney draw up an agreement and you can have your lawyer partner review it,” Garst replied assuming something that Ron hadn’t said.

“Fair enough, Garst, consider your hand shook,” Ron replied.

“Well, I’m off to Washington to see what I can do to get us that land, Green,” Garst said, “I’ll keep you informed.”

o

Ron walked into the Security Office with a grin that rivaled the one Gary had on his face this past Thanksgiving. He was even humming “Stormy Weather”.

“You look like the cat that just ate the canary,” Gary said, “What’s got you so happy?”

“Do you know the name Garst, Gar-Bear?” Ron asked.

“Well, back in the 50’s Nikita Khrushchev visited the Garst Seed Farm in Iowa and I believe that’s where we got our canola bean seed,” Gary said. “Why Ronald?”

“I just got off the phone with a man named Garst,” Ron related. “I called up there right after Thanksgiving to check on that canola bean seed.”

“You mentioned that and said that he couldn’t supply us any,” Gary replied.

“He just called,” Ron repeated, “And he asked me how much land we had, etc., etc., etc. The bottom line is we’re getting the four adjoining sections of ground, 25% of his new Arizona Seed operation and all of the seed we need so long as the guy is in business.”

“You’re kidding,” Gary responded.

“So help me God partner,” Ron said, “We have to have 36 doublewides in and ready to go by early April. I told him we’ve give his people reduced utility rates and biodiesel below wholesale. And, he said he’d hire a dozen of our people, so I mentioned our 9 Mid-western farm families and David’s boys, though not by name.”

“So what’s the deal on the homes, Ron?” Gary asked, “Are they on us or on him?”

“The subject didn’t come up Gar-Bear,” Ron admitted, “And it didn’t even occur to me. However I told him my partner went to Drake Law School, so I don’t imagine he’ll try to screw us.”

“You told him I was a lawyer?” Gary snapped.

“No, I just said that you went to Drake Law School, Gary,” Ron laughed, “The man is free to assume whatever he wants. Besides, we’ll also have our regular attorney look the papers over, too.”

“That’s a total of 90 houses at 75 amps a house Ron,” Gary said, “6,750 amps unless I miss my guess. We’re going to need to add 3 wind turbines and 3 more generators.”

“Ok, I’ll get Jim and company going on the foundations and put in the basements first,” Ron said. “In the meantime, I’ll order 4 more wind turbines and 4 more generators. You never know how much power Garst’s operation is going to take and we’d better be safe than sorry.”

“How is the corporation on money?” Gary asked.

“We’re in primo condition, why?” Ron asked.

“Well, if we can afford it, we might just as well double our generating capacity,” Gary suggested. “That way we’ll be covered for future growth.”

“Suits me,” Ron replied, “I’ll have to tell you Gar-Bear I half expect that we’re going to have to pay for the housing. Why else would the guy give us 25% of his operation?”

“Suits me, Ronald, it’s your money,” Gary smiled, “But buy used homes.”

All About the Weather – Chapter 19 – Too Many People

“I was pretty much figuring on buying used homes if I can find them Gar-Bear,” Ron said, “But I keep an eye on those mobile homes all of the time and lately, there haven’t been any used ones on the market in the area.”

“You might try that Fleetwood dealer in Gallup, Ron,” Gary suggested, “If you buy all 36 at once, I’ll bet he’ll cut you a lot of slack on the price.”

“Now that’s an idea,” Ron agreed. “I might almost get new ones for the price of used. Is there anything else we need to consider?”

“Just the usual stuff like expanding the septic field again, running utilities and a second 6” well,” Gary laughed, “You didn’t think that we’d get by free on this deal did you?”

“It’s beginning to add up a little faster than I thought,” Ron admitted, “But we can handle it so far. Anything else while my heart is still beating?”

“Now that you mention it yes,” Gary was grinning, “I’ll talk to Jack and have him put the word out again plus order another 36 MIAs. I’m not protecting those people so I suppose that we’d better arm them and teach them to shoot.”

“We’ve been growing our MIAs a lot faster than we’ve been growing our 7.62 ammo, Gary,” Ron said, “And we’re really short on those 20-round M-14 magazines. I expect we’ll have to bite the bullet, no pun intended, and load up on more 7.62 ammo and magazines.”

“Ok partner you talk to Jim and I’ll talk to Jack,” Gary said.

o

Cummings was more than willing to double the existing generator base and install all of the equipment that went with that project. They even offered a volume discount. The manufacturer of the wind turbines proved to be a challenge. The minimum order was 10 units, take it or leave it. And, you were expected to buy enough parts to last the expected life of the turbine. Ronald didn’t see that he had much choice in the matter so LTA went from 6 wind turbines to 16. And naturally, he called Cummins power back and told them to make it 10, not 6 generators. Although it was beginning to get expensive, money hadn’t become a problem, yet. What was becoming a problem was that darned biodiesel. Ron figured to be safe they were going to have to increase their storage from ½ million to 1½ million gallons. And he didn’t figure he could handle putting in 80 more tanks, there were space considerations.

At least, the mobile home dealer in Gallup cut him some slack on the price. A lot of slack, as it turned out, because sales had been pretty danged bad. People were buying used trailers, but they just wouldn’t go the extra money to have something new. So, the

guy literally sold the trailers at \$500 over cost. It was a good thing that Fleetwood was offering a factory incentive of \$2,000 a unit, he'd make out pretty well on 36 units. Ronald actually managed to buy the new homes for what he'd expected to have to pay for used homes. Aside from the usual desert insulation package and construction, the homes were pretty near the bottom of the line homes. One advantage quickly surfaced that he hadn't anticipated. You had a choice of a gas or an electric home. That put him another several hundred dollars ahead on the purchase.

Over the summer of 2015, Jim had loaded up on the diesel fueled portable heaters. He was quickly learning that one never knew what to expect from those three old geezers. Ron had come to him and talked about doubling the number of wind turbines and basements for 36 more homes. And, Ron expected it to be done by the later part of March so there was time to setup the new homes. And then Ron was back and said there would be 10 wind turbines. It sure was a good thing he'd gotten those extra portable heaters. Jim tackled the wind farm along with some help from one of the cousins and his two foremen and the other two cousins started thawing out the ground for a long basement trench.

When it began to appear that they were up against it time wise, Jim was able to contact most of his former employees and enlist the aid of the farmers. Fortunately it was mainly a matter of extending the water main and two electrical conduits, one for electricity and one for telephone/computer/satellite cable feed. The existing septic system wouldn't support many more homes so it meant a new system. Those old guys had put in a larger than normal satellite dish and a series of amplifiers so it wasn't any trouble getting signals everywhere.

Gary was having his fair share of trouble finding more phone equipment because the units they used were now obsolete. In desperation, he turned to E-Bay and had what he needed in a matter of days. These people of Garst's were either going to have to provide their own computer or buy one from LTA, Gary wasn't about to give away 36 of his last 48 computers. Jack had put out the word he was looking for 4 or 5 dozen M16's, including a dozen with M203's, more grenades, mines and so forth. He also contacted a guy he knew that had gone overboard just before Jack had moved and loaded up on surplus 7.62 ammo. It turned out that the guy had also all but cornered the market on USGI M-14 magazines and the guy was hurting big time for money. Never one to pay the price when he could pay less, Jack offered the guy 50 cents on the dollar for the whole shooting match. The final price was 65 cents on the dollar (cost, not retail), but Jack had to pick the stuff up. The semi was immediately dispatched to rein in the haul before the man changed his mind or got a better offer.

There were 4,000 of the magazines and 1,000 800-round cases of the surplus. Man they had all the 7.62 they needed from now until forever. The word hadn't been out 3 days before there was a major armory heist on the west coast. Somehow, someone had managed to hit Camp Pendleton and although the military wasn't saying how large the theft was, it seemed apparent from the tone of the military spokesman that it had been a pretty significant theft. Steve came to see Jack when he heard of the theft on the news.

“Expanding our armory are we?” Steve smiled.

“I only put out the word for 4 or 5 dozen M16’s and such, so help me Steve,” Jack became defensive.

“I’ll be around in case you end up with anything you don’t know how to use Jack,” Steve said, “I think we covered about every weapon there was in Special Forces school.”

“I didn’t know you were a Green Beret,” Jack said.

“I wasn’t a Green Beret,” Steve countered.

“But you said Special Forces,” Jack protested.

“Well I could have been Force Recon or Delta Force, but as it happens, I was a SEAL.” Steve smiled.

“SEAL?” Jack said, “As in swim around in the mud planting explosives and all that kind of stuff SEAL?”

“Is there any other kind besides those funny animals that eat fish and live off the California coast?” Jack laughed.

“Well I’ll be darned,” Jack said, “Talk about falling it and come out smelling good, our Chief of Security is a SEAL.”

“Just keep that between you and me for the present Jack,” Steve said, “I’m still in the middle of evaluating what kind of changes I like to recommend.”

o

“This is Garst,” Garst announced.

“This is Green,” Ron replied.

“I’m back from DC, Green, you should be getting title to those 4 adjoining sections any day,” Garst reported. “My lawyer has the papers ready to send to you, are we still together on this?”

“A man’s word is his bond, Garst” Ron replied. “We’ve got 36 new homes on order and the basements are coming along nicely. We had to change around a few things, but we’ll be ready for your people in early April.”

“What did you have to change around, Green,” Garst asked.

“Well, Garst, our electrical facilities were maxed out so we’re putting in another 6.75 megawatts of capacity and standby capacity,” Ron explained. “Plus we have to expand our septic system and add another well, but we’ll be ready by April, I assure you.”

“Never had a doubt, Green, how much were those homes and I’ll send you a check?” Garst asked.

“Including the basements, or just the homes?” Ron asked, flabbergasted.

“Nah Green just the homes, you have to bear 25% of the expense you know,” Garst replied.

“Well, I got a deal on those homes Garst, \$500 over cost. The total was \$975,000,” Ron replied.

“Sounds fair Green, I’ll include my personal check with those papers,” Garst said.

“Yes Sir, Mr. Garst,” Ron struggled to get out. (Personal check?)

“I’ve got some people not doing much, if you could put them up, I’d be glad to send them down to help you folks, Green,” Garst offered.

“Mr. Garst, about the only accommodations we have is our underground shelter, but it’s pretty nice,” Ron replied.

“Ok Green I’ll send the 35 men down to help you folks out,” Garst replied. “I’m just going to hire a moving company to move the whole shooting match and my realtor will sell their homes for them. You have a first name, Green?”

“It’s Ron,” Ron replied.

“That’s right, you told me that didn’t you?” Garst said, “My name is Ray.”

“Well Ray, we’ll be looking for your people,” Ron said.

“You know Ron, I think I’ll just send those papers and check with them,” Ray said, “That will be faster than the mail.”

“You take care, Ray,” Ron said.

“You too Green, er, Ron,” Ray replied.

◦

“Hey Gar,” Ron half shouted, “Guess who I just talked to?”

"If it was the Archangel Michael, Ron" Gary mumbled, "Tell him I'm ready to go."

"Hey, what's with you partner, you look like crap," Ron said.

"Well, I'll tell you Ron, the last two mornings I woke up with a stiff and sore neck," Gary explained. "You can't believe how badly it hurt. Anyway, I took a Vicodin yesterday morning and one again last night. When I got up this morning, it hurt worse than yesterday. So, I took another Vicodin. Then, I got Sharon to rub in some Mineral Ice. Bottom line is I've been dragging butt for 2 days and my neck still hurts. You know, I hadn't taken any of that Vicodin for a long time. I guess I didn't realize how much that crap takes out of you. And it doesn't really do all that much for the pain either."

"I could have told you that Gar-Bear," Ron said, "I see that I'm not the only person who doesn't ask about things. Anyway Ray Garst called. He's sending down 35 men to help us with the construction. And guess what else he's sending us? Never mind, he's sending us a check for what I paid for those homes, \$975,000. And, Gary, it's a personal check."

"I guess you ain't the only rich guy around, huh, Ronald," Gary grinned.

"You know, since we ended up having to put in 10 wind turbines and 10 generators, we're going to have to put in more fuel storage," Ron said. I was thinking about an aboveground 1 million gallon tank."

"Have you contracted for that new well yet Ron?" Gary asked.

"No but what does that have to do with an above ground fuel storage tank?" Ron asked.

"Well I happened to be looking for something on the net and I ran across a company that builds above ground fuel and water tanks," Gary explained. "Since we're going to have to put in a well anyway, why don't we have the same company put in a fuel storage tank and a water tower? Name is Fisher Tank Company."

"Geez, I don't know Gar-Bear, that could get pretty expensive," Ron said.

"Ron, they put in a 3 million gallon water tank for someone for \$1.1 million," Gary replied. "Somehow I doubt it would cost us more than a million to put in a fuel tank and a small water tower, say about a million gallons too. Besides, with that refund from Ray Garst, we'd only be out the difference between the reimbursement and what the whole setup cost."

"And, we'd have fire protection too, Gary," Ron said, "Give me their website and I'll look up their number and give them a call."

"I wrote it down, but I can't remember where partner," Gary replied. "It would be nice to have a fire hydrant for Missy to pee on, though." (She always hiked her leg...)

All About the Weather – Chapter 20 – The Longest Summer

When finally the weather permitted, Damon and Jack set off to pick up the ammo and magazines. That purchase had raised 3 pairs of tired old eyebrows and the men wondered what in the hell he was thinking. They only had 108 MIAs plus the 3 personal rifles of the geezers. Even considering the new rifles on order, they'd only have 147 rifles. Make that 150, Jack had 2 FAL's and Steve had a National Match M1A. That gave them over 5,000-rounds per rifle and it didn't count what they already had. However, when they looked at it like that, 5,333 rounds per weapon, it didn't sound like nearly so much ammo. The problem was storage space more than anything else. Jack offered to store 750 cases of the ammo in his basement and move it to the armory as they used up what was stored there. That solved that problem.

Two less than honorable Marines had heard via the grapevine that someone was in the market for some M16's ammo, mags and anything else a Marine or soldier was likely to use in combat. The men had been relieved of their stripes, served a little time in the stockade and were put on a detail unloading and stacking 5.56 ammo for the recruits to use in training. They formulated a plan overnight and the next day, when two more truckloads of 5.56 ammo showed up, the men only emptied one truck. They refilled it with a generous quantity of brand new M16A3's, M203's, M67's and several cases of the 40mm HEDP rounds just to round out the package. The men changed into civies and drove those trucks off camp bold as brass. The news was filled with their little operation and they decided to lay low for a while. Besides, they'd only heard that someone was in the market, not who that someone was. They knew eastern Arizona, but didn't know where in eastern Arizona.

Despite the weather, or perhaps because of it, they managed to get to Winslow before they were forced to lay low. Winslow, Arizona isn't that large of a community in the first place and it's in Navaho County, putting the community under the jurisdiction of good old Milt. Milt was an interesting fellow. He'd been a Deputy Sheriff for years and had finally made it up the Chief Deputy under Steve's predecessor. Milt knew the score and also knew where all of the bodies were buried, so to speak. He was nearing retirement age when Steve announced he wasn't going to run for another term and Steve offered to back Milt if Milt would just run for Sheriff. Milt was a decent law abiding citizen, but he hadn't put away much for retirement, so he literally jumped at the chance to extend his stay as Sheriff. One other thing about Milt; he thought all of those darned gun laws were just plain stupid. Milt only enforced the gun laws when a bad guy used a gun in the commission of a crime.

As it happened, one of his Deputies spotted the two semis in Winslow and started keeping an eye on them. Eventually, the two Marines, or in this case maybe Jarheads really did apply, checked on the semis. The Deputy spotted them and followed them back to a rooming house where they were staying. The Deputy dutifully reported the whole thing to Milt and Milt told the Deputy to hold off until he had a chance to think about it. Milt

correctly concluded that these guys must be the two Marines that he had paper on. He also concluded that the guys must have disposed of their stolen goods BEFORE they'd ever shown up in Winslow. Wasn't that a shame; the Marine Corps were out all of those weapons, ammunition and explosive ordinance. Now Milt could have probably served 2 or 3 terms as Sheriff, had he chosen to do so, but Milt was frankly a little tired and with the climate changing the way it had over the past few years, he was ready to retire as soon as his term in office was up.

Milt called Steve and suggested to him that there were a couple of semis over in Winslow that Steve ought to look into. He had a Deputy keeping an eye on the two guys at the rooming house but he just couldn't spare anyone to watch the trucks. These might be the guys, Milt said, who had robbed Camp Pendleton. Before he'd hung up the phone, Steve had formulated a plan. He got with Jack and Damon and the three of them headed to Winslow immediately. They drove the two semis back to LTA, unloaded the contents and returned the trucks to exactly the same spots where they had been parked. The next day, after Steve had called Milt back, Milt told his Deputies to arrest those two guys and seize the trucks.

Jack went through the contents of the two trailers, made an inventory and decided how much he'd have been willing to pay for the goods. He took the matter to Ron, Gary and Clarence and they agreed that they should pay someone for the merchandise; they now had everything they needed for the foreseeable future. Ron told Jim to add a 37th basement and he called the dealer in Gallup and ordered one more doublewide. They ended up storing the explosives in the corncrib/armory/cooking facility and the 5.56 ammo in the basements. There were 200 brand new M16A3s, enough for 4 platoons (writer's license: the USMC uses A4s). There were also 48 M203s and enough other items that they could fight 2 or 3 wars. Milt drove to Flagstaff to deposit the check in a new checking account. Shortly thereafter, he began to complain of chest pains. The doctor couldn't find anything wrong with Milt and told Milt it was probably just stress and that he should consider retiring. Regrettably, Milt announced his retirement and said he'd still be around; he was moving to the ranch where Steve lived, LTA.

The company from Pennsylvania was more than willing to talk to Ron about a water tower and a fuel storage tank. It would run \$1.4 million for the 2 storage vessels and they recommended a minimum well of 24". They wanted 10% down and would build the tanks on a percentage of completion basis with a 10% 90-day reserve. They normally would have required a lot of time to put in two large tanks like that but none of their three locations had much business and if they put three crews on it, they could have everything completed by the fall of 2016. Gary explained to Ron that percentage of completion basis meant that they would be paying for the tanks as they were constructed. And, once the tanks proved to be free of defects, they would be obligated to pay the remaining \$140 thousand.

Ray Garst's men stayed right on the ranch, helping to get the new homes ready and when a train arrived with all of Garst's farming equipment, they started to work the extra sections that Garst had acquired. Ray Garst had a lot of friends in Washington and not

only did he acquire the 4 sections for the LTA people, he acquired 24 sections for his own operation. It was anybody's guess who was the busiest person on the ranch that spring, but it was probably that guy digging the wells. He had to put in 2 more 12" wells for Ray Garst, plus wells for the ranch. Since he couldn't put in a 24" well and didn't believe that the aquifer could handle a 24" well, he put in 4 12" wells to supply the water tower. Those 4 wells supplied as much water as a single 24" well and they didn't draw down the aquifer as badly, spaced out as they were. The old wells were hooked to the water tower too.

o

Milt made an amazing recovery, leading his doctor to conclude that his problem had indeed been job stress. Ray Garst and his people, together with the 9 Midwest farmers and 3 of David's boys worked from sunrise to sunset producing the crop of hybrid canola beans. This sort of put a crimp in the biodiesel operation, but Damon and Mary took Jason and Jeremy's places and Milt turned out to be pretty handy running a still. The only thing wrong with Milt's heart was that it beat a little faster every time he thought of the balance of his new checking account in Flagstaff.

Deprived of the canola seed, LTV was barely able to manage to produce 30 bushels per acre on the 7 sections of land devoted to soybean production and 100 bushels per acre on the ½ section of corn. The garden this year was larger to account for the additional 37 families. And winter held off until mid September, permitting the contractor to complete the water tower and the million-gallon oil storage tank. Working 24/7, they had managed to process over 134,000 bushels of soybeans. Having filled the underground storage tanks, they had been forced to rent space all over eastern Arizona to store their extra production of biodiesel. However, with the completion of the oil tank, they moved the biodiesel back to the ranch and were pretty well set when winter arrived.

Perhaps a summary is in order. There were 91 families living at the ranch. The ranch itself now consisted of 8 sections, or 5,120 acres, of ground with 7½ sections being under cultivation. The 91 homes, outbuildings, garden and pasture accounted for the other half section. They had 16 wind turbines and 16 generators, each with an electrical capacity of approximately 675-680kw, or a separate capacity of 10.8mw for each of the two systems. They had a million-gallon water tower and a new fire hydrant system. All 40 of the 12,000-gallon tanks were full of biodiesel and they had about 200,000-gallons in the new aboveground fuel storage tank. There were 115,000 bushels, give or take, of soybean meal in the silos and 35,000 bushels of corn in the overhead storage. Ray Garst had produced on the order of ½ million bushels of the new hybrid canola seed. He had put in his own operation and bagged the seed as soon as it had been sorted. Ray had a mammoth storage building over in Holbrook from where he intended to ship the seed.

No one had taken any offense at the LTA policy that everyone become completely familiar with the firearms, but truthfully, no one had much time during the summer to both-er with it. Jack saw to it that LTA's inventory of company firearms; both the MIAs and

the M16s were equipped with the appropriate suppressor. If anything, LTA was a bit long on weaponry. But, was it really possible to have too much of a good thing?

The 10 new wind turbines had a new feature that allowed the turbines to operate in extremely high winds, up to 60 knots. It was some sort of a braking device that the men neither understood nor cared about. However, they did have the 6 old turbines retrofitted so that they wouldn't have to shut the turbines down due to excessive winds. A knot was 1.1516 miles, so 60 knots was about 70mph. Given their experience with the blizzards of the past 2 winters, the odds seemed to favor being able to run the wind turbines most of the time and not to have to resort to the generators. They had excessive electrical capacity again and were once more back in the black with the utility company. Those 144,000 plus bushels of soybeans that they'd managed to process had yielded about 115 thousand bushels of soybean meal, which was far in excess of what they needed at LTA. They had managed to sell off 100,000 bushels of the meal for the princely sum of \$475 per bushel. Even after paying for the water tower, fuel bunker, firearms and so forth the checking account balance for the corporation was on the order of \$10 million.

Late in the summer, Ronald had arbitrarily decided that they needed to increase their storage space. Money was no object and he had an outside contractor erect a new 250' x 400' storage building. Those extra 100 thousand square feet of storage space would start to fill up when the railcars of supplies he ordered began to arrive. Ron had 10 railcar loads of toilet tissue alone and that had come at a premium. A lot of the logging operations where timber was harvested and turned into paper products had slowed down and toilet tissue and paper products were going for a premium these days. Jim and company had spent all summer with their bulldozers excavating a space for a second underground shelter. That's how they did most of their excavating, as in the case of the basements. They used bulldozers to scrape off the earth, layer by layer. If they had used backhoes, they would still be working on the basement holes.

As one might imagine, excavating for all of those basements had produced an excess of soil/dirt. Whether it was through foresight or just dumb luck, the three old geezers had directed that the dirt be used to form a windbreak around the 320-acre compound. On the western edge, from whence came the wind, it was a low windbreak, barely 6' high. To the south, which accessed I-40 via a country road, they had put in another 6' high windbreak and had planted it with pine trees. Jim and his people were currently adding to the dirt on the eastern and northern approaches to the compound. Steve believed in what George S. Patton had said, e.g., that fixed fortifications were monuments to man's stupidity. However, that hadn't prevented him from liberally seeding the slope of the south windbreak with an assortment of M-14's, M-16's and M-18's. Maybe they would need the precaution in the years to come and maybe not. Nevertheless, he'd had the slope seeded and a 3-wire, barbed wire fence erected to keep out the idly curious.

o

Winter 2016-2017...

When the snows came in September, LTA was as ready as they could be. Ronald had added a couple of snowplows to their equipment and they were able to keep the roads open. However, it never did seem to completely stop snowing. As a consequence, they were pretty much forced to rely on radios instead of the satellite TV for news. The news, such as it was, wasn't all good. Parts of the country were buried in snow while other parts of the country had the cold and the winds, but very little moisture. Even though it now seemed likely that the world might be entering an extended period of severe climate, there was still a moisture shortage in places, greatly affecting the ability of those places to produce crops. Russia, apparently, had managed to seize large portions of the African Continent. NATO, the new one, wasn't particularly interested in rushing to Africa, either. The United States, Canada, Mexico and Great Britain were having enough trouble just distributing the gradually falling supply of food.

Mexico, it seemed, had been the greatest benefactor of the climate change. The Colorado River was now flowing much stronger and Mexico had turned into a country that was supplying much of the food for the other three NATO members. There was now an abundance of petroleum products, predictions to the contrary notwithstanding. The new Alaskan field was producing far more than had been anticipated and the new pipeline, across Canada, had been completed. Australia had turned out to benefit from the climate change the most in the final analysis. The Aussies were shipping meat and grain all over the world, but even they couldn't meet the demand. Food, which for most of modern history had consumed only about 20% of the average American wage earners salary was now costing them as much as 35% of their take home pay. And with more of their income being devoted to food, American's had much less money to spend on the non-essentials.

New car sales, for example, had fallen to the point where the major auto producers had been forced to merge to stay alive. Among the current crop of cars was a diesel powered hybrid vehicle that got about 65 miles per gallon. Gasoline was still produced, but in far smaller quantities. The world was learning its lesson, but had that learning come too late? Aside from some regional conflicts and Russia's invasion of Africa, a major war had not yet broken out. Northern Europe was a mess however, and people had moved south and cleaned up what remained of the nation that used to be called France and occupied the territory. The initial outrage over the US's unilateral action had died out, just as had the French. The French, or so it seemed, had been a thorn in everyone's side. Besides, the Worldwide Internet was still functioning most of the time and people could go to Global Security and remind themselves of all of the remaining nuclear weapons in the NATO inventory. However, GS now charged a monthly fee of \$10 for more than 8 visits.

LTA had added a small flock of turkeys over the summer of 2016 and this Thanksgiving they would have turkey and all of the trimmings. His hunger for breaded pork tenderloin sandwiches finally satisfied now that they were regularly available, Gary was looking forward to turkey this year. The climate change had also allowed them to produce crops one might not normally associate with Arizona like cranberries and such. About the only

major food item missing from the diet there at LTA was tuna, but the pond supplied an ample supply of fish and apparently no one noticed.

All About the Weather – Chapter 21 – The Cold, Wet Winter

Starting late, as they had, Jim and company had barely gotten the new shelter closed up before the snows came. The shelter was essentially a large, empty building. Gary, Ron and Clarence decided that the new shelter should be a duplicate of the original and they placed orders for an all-electric kitchen, a second set of communications equipment and all manner of furniture. The two shelters were side by side and shared a common wall. That had been the only reason that they'd been able to get it done in time. Rather than create a second entrance, they had just knocked a hole in the wall between the two shelters. Even so, they had to equip each of the buildings the same. Throughout what was proving to be a very long, cold and wet winter, the equipment for the new shelter arrived and everyone was kept busy completing the place.

Garst Seed Company had long been a producer of seed corn. However, none of that operation had been moved to Arizona. What seed corn production the company still did was back in Iowa and frankly, with the Iowa weather the way it had been the past few years, seed corn production had fallen on hard times. Garst had sold out his operation to Pioneer Hybrid in the Des Moines area and intended to concentrate on the production of the new hybrid canola bean down in Arizona. Farmer's in the southeastern US were growing a lot of peanuts these days for the oil. California would have still been America's breadbasket, but the ongoing drought in the area and the government's refusal to let the farmer's divert more water from the Colorado essentially doomed California agricultural production. They were still producing crops in California, but the production was perhaps as little as $\frac{1}{3}$ of the golden years.

"You know fellas," Clarence said, "With all of this snow we're having this year, we're going to have a problem come spring."

"What kind of a problem, Clarence?" Gary asked.

"Well, when that snow all melts, that water is going to run over to the west windbreak and pile up," Clarence pointed out. "Now that's going to flood out the lake and generally make a mess of the whole compound."

"How the hell are we going to get around that partner?" Ron quizzed.

"Well, I heard around that Steve has some serious experience with explosives," Clarence replied. "Maybe we should get him to blow some small holes in the windbreak so the water can drain out."

"Won't that be pretty risky for those wind turbines?" Gary asked.

"It might," Clarence allowed, "But if he's as good as I heard, he ought to do it without damaging the equipment. If it was me, I'd put in a storm sewer to drain that water over to the land to the west, what with it being downhill and the like." (Not a typo, Clarence sometimes slipped.)

“I’d never thought of a storm sewer Clarence,” Ron admitted, “It was so dry for so long that I guess it just slipped my mind.”

“It’s still pretty dry in the summer Ron,” Clarence said, “But it would be nice if we could get some benefit out of all of this snow.”

“It sounds to me like we might benefit from having a reservoir Clarence,” Ron suggested. “You know, we could take a section of the BLM land and have Jim and company use those dozers to grade us one.”

“That sounds like a good idea Ron,” Gary piped in, “But I’m not so sure he has enough equipment to handle a project of that size.”

“Hell Gar-Bear,” Ron replied, “Some of those people of his still live in Winslow and we can buy more equipment or even maybe rent it. I think Clarence has a good idea. Once we get that reservoir, we can move all of our fish from the pond to the reservoir and recover that land for expansion of the compound. Our current electrical capacity will allow us to double the number of homes in the compound pretty much.”

“I thought this place was big enough when it was just us and our families plus the cousins,” Gary smiled, “It sounds to me like you want to turn the place into a small town.”

“Well why not Gary?” Clarence asked. “There’s safety in numbers and we do have the carrying capacity for another 90 families or so. It might be a good idea.”

“I guess that the reservoir makes sense guys, but it’s going to burn through a lot of our biodiesel putting it in,” Gary observed. “Maybe we ought to scrape off a few sections of the BLM land and plant a really big crop this year like we did before to try and build up our supplies of biodiesel. If we could produce a half million-gallons of biodiesel a year over the next couple of years, I’d feel a whole lot better.”

“Well, if we planted about 14 thousand acres with that new seed of Ray’s,” Ron suggested, “That would give us around a half million gallons of fuel a year. And once we get that new bunker filled up we can go back to our normal production.”

o

Washington, it should be noted, was doing its best to keep a lid on things around the country and on the North American Continent. Government, faced with looming deficits caused by falling tax revenues, themselves a result of the severely recessed economy, had been forced to reduce staff over the years through attrition. A lot of the social programs that had once supported the US had been slowly eliminated by the Republican administration. Democrats found themselves in quite the fix. While they opposed cutting the social programs, they also opposed deficit spending.

They were all in favor of raising taxes to make up for the shortfall, but the Republicans held their ground. More than one Democrat failed to win reelection because he or she hadn't come through for his or her constituents. Most Americans recognized that the world was going through rather severe changes. Some fundamentalists were claiming that it was the wrath of God for spoiling the planet while others said that it was the 1,000 years of tribulation foretold by the Book of Revelations and that the Devil was living among us. The three old geezers, if they believed either group, tended to agree with the former more than the latter.

They were getting old and tired, our three friends, but the doctor told them that all of the hard work they'd been doing had been good for them and they had many more useful years of living ahead of them. They took their proposal to Jim and after considering it carefully, agreed that if he could get enough equipment, a reservoir could be constructed. He explained that he could move the dirt downhill and essentially create a cofferdam of sorts. Moving the dirt would level out the terrain and they would end up with whatever depth of lake he could create in one 5-month summer. He could start early, as in mid April and work late, as in mid September and build as large a lake as possible. They would need a tremendous amount of earth moving equipment, he told them, but they could probably rent all they needed for the summer. There was a lot of unused equipment sitting around, he claimed.

As for people to operate the equipment, he assured them that that was the least of his concerns. Idle equipment meant idle operators and they would probably end up with more people than they had equipment for them to use. In response to that remark, the men suggested that he run the operation 2 or even 3 shifts. If they were going to rent equipment, they might just as well get full use of it. If they excavated 24 hours a day for 5 months, they told Jim, they should have a pretty darned big reservoir.

They also suggested that he either leave a bit of a grade or make the reservoir deeper in the center. They intended to move the fish from the pond to the new reservoir and the sooner they could do that the better. The old pond would be graded over and more housing was going in. Given the lay of the land, Jim decided to make the reservoir deeper in the center. Not in a circular fashion, but more of a "V". That would result in a slightly steeper slope on the easterly or uphill side of the reservoir/lake but it was the easiest approach, in his opinion.

According to TV, which was now being received periodically, China had invaded the whole of Southeast Asia in an effort to find food for their people. Again, the Administration seemed inclined to not get involved in the problems of Southeast Asia. How many Vietnams did a country need to experience before it got the right idea? Besides, the Chinese had no doubt continued with their program of nuclear expansion and it might not be the best thinking to stir that kettle of soup. A public opinion poll indicated that the American public agreed with the Administration's decision and 73% of those polled thought that the government needed to concentrate on keeping America fed rather than running off ½ across the world to meddle in a 'local problem'.

Back when they'd opted to put in the large satellite dish rather than one of those 2' consumer models, they'd been assured that the dish would pickup satellite signals in any kind of weather. Now, either the weather was a lot more severe than the manufacturer had ever thought it capable of or they had been sold a bill of goods. On the other hand, maybe when the wind was whipping at 50 or 60 miles per hour, the dish just chattered in the wind and couldn't maintain a focus on the satellite. The odds seemed to favor the latter because even on a calm winter day, the wind frequently blew at 25-30mph. Fortunately the snow seemed to pack down hard, or perhaps freeze over, and blowing snow wasn't really a problem. Steve agreed with Clarence's assessment and indicated that he could put a few gaps in that 3' high windbreak on the western side of the compound without, hardly, raising the dust.

January 1, 2017...

This winter was turning out to be worse than the prior year. The winds hadn't risen to blizzard level since the September storm, but they were nothing if not steady. They had only had to resort to the generators for a brief 2 days in September when the winds whipped up to nearly 75mph. As a consequence, they were far better off than they had ever imagined that they would be in terms of biodiesel consumption. Despite the weather, the 130 thousand or so bushels of soybeans had been processed and they were better off by more than 100,000-gallons of additional fuel.

"Ray, we're about to test you on that offer of all the seed we can use for as long as you're in business," Ron commented after the New Years Day dinner.

"Oh, you won't gain anything by planting the beans any denser, Ron," Ray suggested.

"True Ray, but we have about 700,000 gallons of empty space in that fuel bunker and we're going to plant more land for the next couple of years so we can get it topped off," Ron explained.

"Just how many acres are you thinking about planting fellas?" Ray asked.

"Well, for the next two years, we're going to plant 14,000 acres of canola and a section of corn," Ron admitted. "We're a little over on corn up in the overhead, so that should work out about right. Once we get the bunker filled, we'll cut back our production of canola to about 7 sections a year."

"I see," Ray said, "To be honest, Ron when I saw the size of fuel bunker you were putting in I half expected you to crank up production until you got it filled. Why are you going to need to plant 14,000 acres for 2 years, though?"

"Well, we decided that we want to have a reservoir on a section of that BLM land to the west Ray," Ron explained. "It would capture the runoff from the compound and any rainfall we might get. We'll be adding a storm sewer system to channel the water to the reservoir/lake."

“It’s going to take a few years to fill a reservoir Ron, 10” of snow only equals 1” of water,” Ray pointed out.

“We aren’t in a hurry partner,” Ron laughed, “We just want to capture the water as the good Lord provides it.”

“How are you going to create this reservoir of yours?” Ray asked.

“We’re going to rent all the earthmoving equipment we can lay our hands on and work 24/7 for 5 months,” Ron explained. “And whatever we end up with come September will be what we have.”

“I’ll be sure that you have enough seed for those 14,000 acres,” Ray said.

“Good and down the road if the wells get a mite dry, we’ll pull water out of the reservoir to water your crops,” Ron offered.

According to the news, there might be some evidence of movement in the Gulf Stream. On the other hand, maybe it was just wind that blew those icebergs down to the Florida coast. Scientists, according to CNN, were refusing to speculate on the news of the iceberg movement. Some of them still believed that the Gulf Stream was flowing. These were probably the same scientists, Wolf Blitzer speculated, that said there weren’t any such things as UFO’s and believed in Santa Claus. Wolf had gotten pretty sarcastic as he’d gotten older, not that he hadn’t been sarcastic all along. By the way, I’d completely forgotten to mention the name of Garst’s attorney. You wouldn’t recognize the name, but it was someone who Gary had gone to law school with and he was every bit the good attorney Gary thought he’d turn out to be. Even Gary made exceptions when it came to attorney’s who attended Drake law School, but they were few and far between.

It finally stopped snowing for the season in February. Steve took the opportunity to open those holes he’d promised and he didn’t raise much dirt in the process. Milt seemed to be processing a little extra corn and the three old men were wondering what Milt was doing with the extra shine. Fortunately, the alcohol operation was shut down, but Clarence took to sticking the open barrel of alcohol, just to see if the level was dropping. It was marginal at best whether the decrease was due to sampling or evaporation. And, if it was that little, they guessed they didn’t mind if Milt helped himself to a little of the shine. Clarence could hardly stand to stick the barrel, because that was some good smelling whiskey forming in that barrel.

Jim had been on the phone lining up equipment and operators. He had 3 operators for every piece of equipment and then some. It took extra men to keep the equipment running 7 days a week and he did his best to provide employment to every heavy equipment operator he could find. His two men and he would supervise the job and have to work 7 days a week for 5 months, but it was going to be worth it. Jim was estimating that the surface of the lake would be on the order of $5,280' \times 5,280' = 27,878,400$ square

feet with a minimum depth of 30'. You could multiply the 30' by 1.5 to allow for the amount of space below the minimum depth. That meant that the lake would hold about $27,878,400 \times 45 = 1,245,528,000$ cubic feet of water. A cubic foot of water was 7.48 gallons therefore, the lake, when filled, would hold 938,386,869,440 gallons of water. It could take years to fill up.

Water is generally calculated in acre feet so every foot of depth was 640 acre feet. The first 30' would contain 19,200 acre feet and the lake as a whole would probably contain ~28,800 acre feet. In gallons, it would amount to ~938 billion gallons.

All About the Weather – Chapter 22 – But Where is the Water?

Ray Garst waited until just after construction of the lake had begun and the three old geezers decided which 15 sections of BLM land they were going to use for crops and got on the phone to his friends in Washington. He explained that his partners were putting in a reservoir to provide water for his plants if there was a water problem. He wanted that section of ground deeded to them. He went on to explain that his partners were going to grow extra canola beans for a couple of seasons to provide additional canola meal to help feed America's herds. Ray got a 2-year special lease on those 15 sections of ground. Gary, Ron and Clarence didn't know a thing about that conversation until they received the lease document in the mail. Names like Garst meant something to the Representatives and Senators on the Hill and even more to the Department of Agriculture and the Department of Interior.

With Jim and company devoting 7 days a week to the lake/reservoir project, Ron just hired an outside contractor to put in the storm sewer system. The pipe went right through one of the holes Steven had blown in the western windbreak, albeit a little deeper. The contractor took most of the summer to complete the project, but Ron had him put in bituminous streets and concrete curbs and gutters. And Ron also made sure that the streets went right up to the pond so that they could start expanding the following year whether the pond had been emptied out or not. After the pond was emptied into the new reservoir/lake, Jim and company could finish putting in the curb and gutter and streets.

It turned out to be a good thing that they had a lot of biodiesel. Jim must have brought earth-moving equipment in from more than a couple of states to complete the project. It was so noisy that a person had difficulty sleeping at night and that equipment burned through about ½ million gallons of fuel. Think of it, they had moved 1,245,528,000 divided by 27 or over 46 million yards of dirt. Frankly, the men would have thought it impossible to accomplish the task, but Jim and all of that oversized mining equipment he used had been up to it. Clarence was more than happy to collect the bets he'd made with Gary and Ron, too. Gary had lost \$5,000 and Ron \$25,000. Clarence was going to have to remember Jim and company at Christmas time.

They didn't plant any corn during the year of 2017. The 22.5 sections of ground yielded an average of 125 gallons of oil per acre. They started processing the canola from the moment they started arriving from the field. They only kept ahead of the excess bean production by the slimmest of margins. They would end up with about 1,440,000 gallons of biodiesel. They had started the season with about 780 thousand gallons. The construction project had used up ½ million gallons and farming another 80 thousand. Assuming they didn't use a drop all winter, they would have about 860 thousand gallons of fuel. But they knew better than hope that that would be the case. If they ran all 16 generators at full capacity, they could burn through those 705 thousand gallons of fuel in 37.5 days. Thank God some of those generators were excess capacity and the braking devices on those wind turbines permitted them to run the turbines in 69mph winds.

“Do you know what fellas?” Clarence asked.

“Speak oh great winner of bets,” Ron chuckled.

“Jim says it’s going to take a while for that reservoir to fill,” Clarence dejectedly reported.

“So, it takes 30 years,” Ron said, “We might still be around.”

“Yeah well try 32 centuries, my friend,” Clarence said, “According to Jim, a 12’ snowfall only adds about 243 million gallons of water to the lake per year.”

“243 million gallons?” Gary said, “Damn, that’s a lot of water. You must be wrong about how long that lake will take to fill up Clarence.”

“It holds just shy of a trillion gallons of water, Gary,” Clarence explained. “And 243 million gallons is only $\frac{1}{4}$ billion gallons, so I think Jim is right.”

“Look Clarence I calculated that they must have moved 46 million yards of dirt to create that lake,” Gary said. “In the first place, I don’t believe they did that, but for the life of me, I can’t explain why. In the second place a trillion gallons just sounds ridiculous.”

“Gary, I checked his math,” Clarence said. “Unless we both made the same error, the capacity of that lake is 938 billion gallons. And while I can’t see where you went wrong on that 46 million yards of dirt I serious doubt that they moved even a portion of a million yards of dirt.”

“I’m just glad I didn’t bet you \$25,000 like old Mr. Over Confidence there,” Gary said.

“I just bet him \$25 thousand because you bet him \$5 thousand,” Ron said. “But don’t worry about it Gar-Bear, I’ll get even.”

Gary spent the rest of the day making sketches and trying to figure out how they’d managed to build a 1 trillion gallon lake in 5 months. By supertime he was no closer to a solution than when he’d started. It must have had something to do with those bulldozers that were almost as big as his house. A man had to climb a ladder just to get in the cab of one of those things. And, they had used a lot of them; Ron almost had a heart attack when he’d seen the rental bill. That and $\frac{1}{2}$ million gallons of biodiesel gone up in smoke; and, for what, a lake that would take between 3 and 4 THOUSAND years to fill? That water had better be cold and those fish had better be happy with their new home next summer or he was going to get a gill net and seine the lot of them!

Although they were less than a mile from the Little Colorado River, the River had dried up years before. And, when it had been running, it was muddy and filled with trash. That didn’t preclude them from channeling water from the east, however. There was no way that they could fill the lake anytime soon, but every square mile of land they could channel the water from potentially had $\frac{1}{4}$ billion gallons of water on it. If they could add just 3

sections of ground, they would be adding a billion gallons of water. And after they had the biodiesel produced, what would it hurt to drain off those 15 sections of ground or maybe even one more, giving them 5 billion gallons a year? Maybe at that rate of fill, they wouldn't have to worry about grass growing in the lake. It would still take 192 years at that rate, but maybe if they really put their minds to the problem, they could fill it before they died of old age. What did the doc say? 30 years? Well that was on the order of 32 billion gallons a year. So, if they could drain the water from 128 sections, they could fill the lake in 30 years.

Which was academic; because what if the climate killed them all off in 30 years? Anyway, the bottom line was that Gary suggested that them might consider funneling the water from 3 or 4 sections into the lake to help it fill faster and in a couple of years, maybe they could also redirect the other 15 sections. Jim said he could probably handle 3 or 4 sections a year using the existing equipment and the matter was resolved. Of course, if Jim and company were doing that, they were going to have to handle the small lake/pond themselves.

o

Winter is that time of year in farming country when the farmers talk about their successes and failures during the growing season, tend to their livestock and make plans for the coming year. When the snow came in mid September as expected, that new lake had been done and the fellas had made those plans with Jim for the following year. For the first time in 3-4 seasons, winter didn't start out with a blizzard either. The winds blew and the snow came down, but the snowfall was phenomenal while the winds rarely rose above 25-30mph. By mid October, barely a month into the 7-month winter season, they already had close to 8' of snow on the ground. The Midwest farmers had to pitch in and help the cousins with the livestock because of the heavier than expected snow. The snowplows were diverted from clearing the streets to working with the dozers to keep enough pasture area clear so that the cattle had someplace to move around.

The three old geezers had been so focused on getting in the streets, curbs and gutters plus watching the construction of the new lake/reservoir that the cousins repeated requests to do something to provide more space for the growing herd had fallen on deaf ears. However, hindsight is 20-20 and the cousins now had the guys' full attention. There was nothing they could do now in the middle of a snowstorm except deal with the snow, but they had another item to consider for the coming summer. They had sold down the herd some but the cattle and hogs and horses just keep breeding and this year's crop of calves, pigs and foals had undone their efforts. They were slaughtering some of their market weight animals, but that only amounted to 45 steers and 90 hogs a year.

"I think we're going to have to put in some new buildings for our livestock this coming year," Ron had suggested when the problem became abundantly clear.

"Where?" Gary asked, "As it stands we're starting to run out of space here in the com-

pound.”

“Considering the size of your livestock operation, you boys ought to move the entire operation to another section of ground and put in all new buildings,” Ray suggested. “I could talk to those people at Agriculture and Interior and get you another section titled over to you if you could give Agriculture some assurances concerning the volume of meat you’d market.”

“Are you suggesting that we increase the size of our herd, Ray?” Ron asked.

“That I am,” Ray replied. “And you need to add dairy cows to the mix Ron, those Black Angus cattle make good eating, but they don’t produce as much of milk. With things being the way they are up north, I think you could get 4 or 5-dozen farm families to move down here to run the operation for you. Of course, your best course of action would be to put in a large dairy operation, upsize your cattle operation and go to a confinement setup on those hogs. Sometimes you boys just think too small.”

“Too small?” Gary responded. “Yeah right. We have a trillion gallon lake in, there’s nothing small about that.”

“I didn’t say there wasn’t any hope for you fellas,” Ray chuckled. “That lake was a step in the right direction. Of course, it may take 30 generations of our families to see it full, but that’s no big deal, it’s a start. Now, if you were to put in a large dairy herd, say 120 head, and a creamery to process the milk, you’d need a fleet of trucks just to deliver the milk and cheese. You can increase that herd of cattle to as large as you want considering how much canola meal you produce each year. And, there’s no magic to a confinement operation for hogs. It will take you a year or so to set this whole thing up, but when you’re done, this ranch will be a major food producer.”

“Who are we going to get to run an operation like that?” Clarence asked, “None of us are really farmers.”

“Those 3 Navajo boys seem to be on top of everything and I understand they’ve been with you for a long time,” Ray suggested. “Put them in charge of it and let them pick people to help and advise them.”

“Uh, Ray, if we get that big, we’re going to need to keep those 15 extra sections just to produce meal,” Ron ventured.

“And, you’re going to need to put in a larger fuel bunker too Ron,” Ray suggested, “I think you boys sort of miscalculated how much biodiesel you’re going to need to keep those generators running if a big blizzard blows in.”

Indeed, winter was the time to review the operation and plan for the coming year. After that conversation, Ron contacted the Fisher Tank people and asked if they were available the coming summer to put in another water tower, but more importantly a 2 million

gallon fuel bunker. If he could pay for it, they told him, they could get it done. They'd have to hire extra help, but all things were possible. Then, Ron called the contractor who had put in their streets and such and asked if he could return the following summer to finish out what he'd started and add a couple more streets. The man was glad to have the work. Ray Garst got on the phone and got those 15 sections plus 2 more deeded to LTA.

Ray also suggested someone to build the confinement building for the hogs and another company, both from Iowa of course, to raise the barn and install the milking equipment. And, through it all, the snow continued to fall. They were barely into mid November and they had 14' in the flat spots. Ray and Ron were wheeling and dealing and Gary and Clarence just sat and watched the two men go at it. Ray called a friend in Iowa and put the word out they were looking for 4-5 dozen families to move to Arizona to run a large farming operation. They ended up with applications from 90 families before Christmas. That meant trouble that much was certain, 90 additional families would put a crimp on their electrical capacity. They had just enough capacity to handle the 90 additional families, but that new farming operation would require a whole lot of electricity in and of itself.

The mobile home dealer in Gallup said he could get Ron 90 homes, but they'd have to start building them right away. Ron said he'd take 90 more of the same and they better get to building. The wind turbine company said the new minimum order was 12 turbines, but they could deliver and install that large of an order and the attitude of the salesman really po'd Ron. It was almost like the company was doing them a favor by selling them wind turbines. Ronald told the man that he couldn't possibly consider placing that small of an order, but he would come down to 24 turbines if they'd deliver and install them and the control panels.

The salesman at Cummins Power told Ron the same thing, delivery and installation for a 24-generator order, and they'd see their way clear to including a 3-year supply of engine filters and some spare parts. Before it all got away from him, Ron sat down with Gary and Clarence and asked what else he should be considering. They suggested an additional community building to house some of the new generators. Since Ron had committed them to going from 16 units to 40, and had effectively increased their capacity from 10.8mw to 27mw they were going to have to make some changes with respect to their biodiesel operation and their fuel storage capacity. Assuming, and that's just assuming, they had to run 40 generators for 210 days at full capacity, they'd burn through 9.8 million gallons of biodiesel. Therefore, maybe Ronald had better talk to that tank company and find out just how big a fuel tank they could get built in a 5 month period.

Ronald returned a day later with the answer. Running 24/7, the company could put in a 3 million-gallon tank in 5 months. And, with extra help, they could also include the new million-gallon water tower. Gary and Clarence told Ronald to put in the water tower and one 3-million gallon fuel tank this summer and 2 more 3-million gallon tanks the following summer.

All About the Weather – Chapter 23 – Mega Expansion

The last half of the 2017-2018 winter was consumed with planning and hiring and all manner of activity associated with the plans for this mega expansion. Jim and company were working 10 hours a day just lining up all of the contractors they needed that they didn't already have. Realizing that it was going to take a while to fill up all of those fuel tanks, Ronald went looking for a more efficient means of producing their biodiesel. He located a company that could put in a plant that more or less worked continuously and could produce 10 times as much biodiesel in the same 24-hour period. Since they'd finished processing the canola beans this year, Ron put his used biodiesel processors up for sale on E-Bay. They sold all of them off in about 12 hours. So far they had been lucky, but March must have been following a script. It came in like a lamb, but went out like a lion, biting into their fuel supplies and bringing operations at LTA to a screeching halt. The wind turbines had all automatically shut down and the generators kicked in before they even realized it. But, they were long on capacity and had lots of fuel and they weathered the storm without incident.

After that final blizzard, the weather cleared and the snow began to melt. The new storm sewer system funneled the water to the lake and hastened the melt off in the lake itself. With the abundance of snow, they actually ended up with an estimated ½ billion gallons of water in the new lake. Clarence got the Department of Fish and Game involved in moving the fish to the lake and they added a couple of species that they thought the lake should have. The contractor undid all of Clarence's months of work creating the original pond/lake in a single day and a second contractor began to cut in the trenches for the new basements. All those folks from Iowa showed up and many of them brought their farm equipment with them. Things began to roll and it was like a snowball going downhill, the pace steadily increased.

Jim and company found that those 4 sections they were planning on doing the grading on pretty much naturally ran off in small streams and it became a simple matter to re-route the streams. Before the summer ended, the three of them had managed to divert water flows on ten sections of ground into the lake. The following year should see an appreciable rise in the level of the lake with conceivably as much as 5 billion gallons of water being added. The cousins realized how valuable they were to the operation and how much they were thought of when the geezers put one in charge of the dairy operation the second in charge of the cattle operation and the third in charge of the swine operation. That left the poultry and horse operations unattended and they invited a couple more cousins to join them on the ranch to handle those. Ron quickly ordered 4 more trailers, 2 for the new cousins and 2 more for whoever else would turn up.

The summer wasn't without its problems, the well digger couldn't start right away due to prior commitments, but most of the expansion came together with ease. The dou-blewides began arriving almost before the first basement was in and it was a real balancing act to keep everyone from tripping over each other. When that well digger did show up, he had 4 trucks and he quickly put in the wells to supply the new water tower and 4 more wells to supply the 15 sections. That new barn was huge, which was just as

well because they grew alfalfa on one of the new farming sections and began to fill the loft with hay. There were other things to be considered, too, like more MIAs, remember the rule was one per home, and things like that. But everyone pretty much knew what was expected of them and they went about doing their jobs without any direction. They took 24-hours off on the 4th day of July to celebrate the Independence of the country and the independence that LTA represented to the 183 families.

Milt had the alcohol production well in hand and had even found time to start a microbrewery. It wasn't Sam Adams or Budweiser, but he put out a pretty good brew. John was now the deputy security chief, which left Steve free to worry about the more mundane thing like repelling a possible invasion from Mexico or Russia or China. And despite the near frantic pace, the boys managed to get everyone on the range for a couple of hours a week. Some of those Iowa farmers had seen action in the Gulf War, I or II, so they didn't have the adjustment that others had. But, like it or not, this was a survival community first and foremost and they had to be prepared for every possible contingency. About the only thing that they didn't accomplish during the summer of 2018 was to put in 2 more underground shelters.

With the demands of a doubled population on the supply system, Derek turned the bio-diesel operation over to Damon and took on running supply full time. Although Derek had set up the supply system, he'd left it to the care of others. What a mess! The first thing he did was to persuade Ron to put in a new, dedicated server for the supply system. Next, Derek used the report generator to generate several reports allowing him to analyze the inventory of supplies. Finally, he sat down with his Dad and the other old timers and they determined automatic reorder points. Not as an actual quantity, but in terms of maintenance of a ten year minimum of all supplies. Once he had the concept pinned down, Derek reprogrammed the system and it automatically forwarded orders, via the Internet where possible, to insure that they never had less than a full 10 years supply of everything on hand. Once installed, the system began ordering up a storm and they quickly realized that they were going to have a problem when the orders began to arrive. There was just time, or so it turned out, to put in a second 250'x400' storage facility.

Apparently, they had dropped the ball on the supply situation, what with all of the new families and all. They were once again reminded that preparation was a dynamic process and what constituted being prepared one year represented woefully inadequate preparations the next. This year, they had planted a section in corn and 21.5 sections in canola plus the section of alfalfa that they got two cuttings from. Their dairy herd was a mixture of breeds and included Holstein, Guernsey and Jersey cows. They had 120 cows and 3 bulls plus another 100 head of Black Angus beef cattle. The confinement operation for the hogs would handle 600 sows so they were becoming a significant pork producer too. The cousin who took over the poultry operation left 10% of the eggs to hatch, which was a separate operation from the egg producing operation and he was producing all the eggs they could consume and even had several cases a week to sell. He didn't much care for those turkeys, they were too flighty to suit him, but he grew the flock.

“Man, I love it when a plan comes together,” Ron announced.

“I thought maybe we’d get to slow down a little this year Ron,” Gary replied. “But hell, we’re going to end up working ourselves to death.”

“This coming year all were going to do is tread water again Gar-Bear,” Ron explained. “Jim and company can continue to divert the water to the lake, but other than that and putting in the other 2 3-million gallon fuel tanks, we’re going to take it easy.”

“It just seems to me that I’ve heard that one a couple of dozen years in a row Ronald McDonald,” Gary snorted.

“Man, you should have seen the size of some of those fish they transferred from the pond to the reservoir,” Clarence commented. “I’m with Gary Ron, we need to spend this coming summer fishing and enjoying life.”

“That’s right Ron, all work and no play makes Jack a dull boy,” Gary added.

“You didn’t need to work to be dull Gar-Bear,” Ron chuckled, “With you it just sort of comes naturally.”

“Now before you get all caught up on this idea that we don’t have a lot to do this coming summer Ron,” Gary said, “Need I remind you that we need to double our shelter capacity to allow for the new residents?”

“I already put out a contract for that Gar-Bear and it’s going to be a turnkey project,” Ron countered.

“We’ll only get about 606 thousand gallons of fuel off that crop, my friend,” Gary said. “At that rate, it’s going to take an awful long time to fill up those fuel bunkers. And we’re going to be consuming a lot of our canola meal to feed those herds, too.”

“We have 90 new farm families here boys, we ought to be able to triple our production from 21 sections to 63 sections,” Ron said.

“As in 60 sections of soybeans and 3 sections of corn?” Gary observed. “I’ll give you credit for one thing partner when you thing big, you lose all sight of reality. Just where in the hell would we store all of those canola beans? I seem to recall that our silo capacity is 32x15,000 or only about 480 thousand bushels.”

“I don’t expect Harvestore would mind selling us another 64 silos, do you?” Ron asked.

“Probably not Ron, but that’s way beyond our capacity to extract soybean oil,” Clarence observed.

“Look guys, we’ll add enough ground this coming summer to grow 40 sections of beans and 2 sections of corn and put in 32 more silos on the new farmstead,” Ron outlined. “Then the following year, we’ll increase our production to 60 sections of beans and 3 sections of corn and add another 32 silos. So far as the extraction operation goes, I found a closed down operation up in Iowa that we can buy for 10 cents on the dollar and have moved here and set up.”

“Geez, you’re serious, aren’t you?” Gary asked.

“As a heart attack,” Ron said. “The only thing is, we’re going to have to start producing our own seed fellas. Either that or Ray Garst isn’t going to have anything to sell.”

“I would imagine he’ll be glad to hear that Ron,” Clarence laughed, “We took a pretty big bite out of his apple this past year.”

“He’s going to have to double his operation this coming year anyway,” Ron said. “Even if we hadn’t used all of that seed, he couldn’t keep up with demand. I’m going to talk to him and see how much more land he can get deeded over to his operation and ours.”

“While you’re doing all of this planning Ron,” Clarence said, “You better plan on a new building for a fire department and a couple of pumpers. Having 80 fire hydrants doesn’t do us much good without fire engines.”

Winter 2018-2019...

Ron wasn’t a complete fool. Two new French fire engines had arrived at the depot in Holbrook the previous afternoon. There was ample space in the garage to house the engines until a firehouse could be built. Ron had checked around and some of those farmers had been members of volunteer fire departments so he had people to operate the equipment if the need arose. He had Steve out checking for some full time firemen, too. He figured that they would need a minimum of 4 people on duty full time and that probably meant 16 fireman. Ron had already talked to the cousins and Harvestore and the 32 silos per year for 2 years were on order.

He hadn’t talked to Ray Garst yet, but Ray had been pretty busy with his sorting and bagging operation. And though he hadn’t uttered a word, Ron had also ordered another 17 doublewides and had let the contract for streets, curbs and gutters and storm drains. What Ron wanted was enough additional sections of ground each year for the next 2 years to permit them to put crops on 42 sections next year and 63 sections the following year plus increase their livestock operation a section each year as they continued to increase the herds.

One other project that Ron had planned and contracted for was streetlights. With a 27mw capacity to their electrical system, streetlights weren’t going to be a problem to power. And, he also had it in mind to put in a couple of vehicles whose sole function was to keep the snow melted off of the fire hydrants. The snowfall this past year had

buried the hydrants so deeply that had there been a fire and had they fire engines available; they wouldn't have been able to get to the hydrants. According to the scenario that had started this project 15 years before, TSHTF starting in about 2020, so he still had a year or more to get them ready. His plans took them through the summer of 2020, but they might get by, after all, according to that scenario, 2020 was the beginning, not the end. Or, maybe it was the beginning of the end.

With the bad, came some good, too. According to that well driller, the aquifer was the fullest it had been in years. 1,500 miles away, they could barely get enough water to drink, but here in Arizona, there was almost too much water. They had barely had to pump water from the wells in the field this past summer for the crops, so ample was the subsoil moisture. But, better safe than sorry; if he did get those extra sections of ground, Ron was going to put in another 12" well for every 4 sections. And, now that Jim and company had figured out how to redirect the water off those 10 sections of ground to the lake, maybe they'd be able to accomplish much more during the summer of 2019. It was sort of funny how some things had worked out. When Jack had picked up those 1,000 800-round cases of 7.62 ammo, their only problem had been storage and the thought that 800 thousand rounds was a lot of ammo. They weren't short on M16's, but they did need to add suppressors to the weapons. And, he'd better let Jack know that he had more homes on order so Jack could get more M1A rifles and equip them.

The thing about suppressing rifles wasn't so much about reducing the sound signature as it was reducing the flash. While the suppressors did reduce the sound to a tolerable level, the thing that they accomplish that was far more important was suppressing the flash. Those M4-FA suppressors that Surefire manufactured had been tested by firing 1,500 rounds through an M-4 carbine as fast as the shooter could swap magazines. Although it had burnt out the barrel of the rifle, the only evidence there was of the rounds being fired was a huge pile of spent brass and a white-hot glowing suppressor that you could actually see the baffles through.

Gary had also discovered the Jet suppressors for the M82s and Tac-50s, and Jack had gotten some from the Texas manufacturer. The guns gave off a report about equal to that of an unsuppressed 7.62; but at the ranges they were intended for, it was acceptable. Gary's Tac-50 had the Jet Titanium suppressor.

They had finally solved the problem with the satellite antenna, too. Some steel and a welder had been used to prevent the antenna wobble and they figured it was probably good to 100mph; not that the news was anything they really wanted to hear. Africa was slowly turning from black to white as the Russians took over the continent and either enslaved or killed the Africans. Anyone with any kind of illness had been killed, according to the news, and it appeared that the AIDS epidemic was about over. That was good, and that was bad, the solution came not from a hypodermic syringe but from the barrel of an AK-74. After expanding to Indochina, the Chinese looked longingly at the Russian natural resources, but thought better of it and invaded India instead. Of course when that happened, the entire US computer support network evaporated overnight.

All About the Weather – Chapter 24 – Checklist

Ronald decided that the only way he was going to be able to keep track of everything and go fishing besides was to make up a checklist.

01. Order 17 homes for 10 fireman/7 farmers ✓
02. Install 17 basements and 17 new homes
03. Order 32 silos per year for 2 years ✓
04. Install 32 silos in 2019
05. Install 32 silos in 2020
06. Install 2 3-million gallon fuel bunkers in 2019
07. Advise Jack to order additional MIAs & suppressors ✓
08. Arrange to grade more water drainage into lake ✓
09. Contract for new streetlights ✓
10. Contract for more curbs and gutters ✓
11. Talk to Ray about more land
12. Hire firemen
13. Hire farmers
14. Get snow removal equipment for hydrants
15. Get new oil extraction facility ✓
16. Buy more cattle
17. Buy delivery trucks
18. Install Creamery

Those were the tasks he needed to see completed through 2019 and 2020. The Creamery might be at the bottom of the list, but it was the highest priority. Ron ran down the list marking an A, B or C priority. Many of the things were already contracted for so all he had to do was keep an eye on them or have someone else do that for him. The cousins could handle the silos, for example. Fisher Tank just needed him to stay out of the way. Jack could hire the firemen and the cousins the additional farmers. Jack had ordered the MIAs and suppressors before Ron had left his office. One of the new firemen could order the equipment to keep the hydrants clear. The cousins could buy more cattle and the mechanic, Jed, could get the new delivery trucks. Apparently all Ron had to do was order one each Creamery, a turnkey project if he'd ever seen one, and talk to Ray about the land.

Ray wasn't going to renege on his promise, but he was mighty happy to hear Ron suggest that LTA produce its own seed beans in coming years. He'd bite the bullet this year and not only give them the seed beans, but seed to produce their own hybrids and seed to produce their own heirloom seeds for following years. And since they wanted more land and the demand for his new hybrid beans was out of sight, it only made sense to get on the phone to Washington. But, one can only saddle up to the trough so often before tongues start to wag and this year, the Departments of Agriculture and Interior wanted to see what they were getting into. These were public lands they were giving away and they were running out of public lands in the area. A lot of the land was occupied by Indian Reservations and the government types just wanted to be certain that

they were getting some bang for their buck.

They agreed to come to Arizona during the month of January 2019 to check things out. God must not like governmental employees. No sooner had they arrived from the airport in Flagstaff than it began to snow heavier and the wind picked up. But, the boys had the Snowcats and after a week when the wind finally died down enough that the wind turbines kicked back in, they loaded the government types aboard the Snowcats and gave them the grand tour. The government people were pleased with the lake, it was bigger than they realized and Clarence made sure they all had a copy of the report from the fish and game department detailing what the lake was stocked with. They were given a tour of the various supply buildings, including the armory, but either they didn't know a M16 from a shotgun or they just failed to trip to the fact that the armory looked like a Regimental armory.

The fellas saved the best for last, showing the men the dairy and livestock operations together with the flocks. The pièce de la résistance was the hog confinement facility. You know those fellas didn't spend much time there! One of the benefits of the heavy snowstorm was that the government men concentrated as much on the snowflakes as they did on the size of the herds. Ron talked in glowing terms of those herds, too and somehow managed to include the cattle on item 16 of his checklist into his herd counts. The fact that LTA was also going to be producing its own canola seeds didn't hurt either. The men seemed to miss the fact that LTA wouldn't be using its own seed until 2020, but Ron knew better than to correct the government experts.

The result was that excluding the ½ section occupied by the housing area and the ½ section the farm area occupied, LTA was going to be allowed 5½ sections of ground for the farming operation (6 sections total) and 63 sections for crop production, excluding 1 section of expanded housing and 1 section for the lake. If you add that all up, LTA grew to 71 sections, 6 + 63 + 2. Ray Garst was expected to greatly increase his production of seed and they granted him an additional concession of 50 sections. Between the two operations, the two companies now owned 121 square miles of eastern Arizona. Not bad if I do say so. And, those 121 sections did not include the land that the folks were collecting runoff from. It sure did look like that well driller was going to be busy this coming summer.

11. Talk to Ray about more land ✓
12. Hire more firemen (Steve)
13. Hire more farmers (cousins)
14. Get snow removal equipment for hydrants (firemen)
16. Buy more cattle (cousins)
17. Buy delivery trucks (Jed)
18. Order Creamery ✓
19. Go fishing (Ron)

Ray Garst realized that he was going to need a lot more people for his operation and that LTA was going to need experienced people to run their seed production operation.

Therefore, he released the 9 farmers and David's 3 boys back to work for LTA and got on the phone to his contacts in Iowa. Before he was done, he'd managed to hire 72 farm families for his operation. He filled Ron in on his additional needs and Ron took a deep breath and adjusted his plans. He ordered another 65 homes and 65 of everything else including rifles, etc. He ordered a third fire engine and advised the contractor to put in 4 stalls instead of two. Then he ordered a Paramedic ambulance to fill the 4th stall. He advised the basement contractor that there would be 82 basements to install instead of 17. He told Derek to adjust his supplies accordingly to allow for the 82 new families and one by one talked to each contractor making the needed adjustments. Derek told him they needed another 250'x400' storage building and Ron told Derek to just get whatever he needed and bill LTA. Well, that was sending a kid into a candy store with a \$100 bill.

Ronald wasn't quite ready to scratch no. 19 from his list, but he had some calculating to do. $282 \times 75 = 21,150$ amps. The capacity was $40 \times 850 = 34,000$ amps. By the time he allowed for the new Creamery and all of the other expansion, he was going to be in trouble again, electrically speaking. And God how Ronald hated to talk to that arrogant SOB at the wind turbine company.

"This is Ron Green," Ron said into the phone. "I need 20 more of those wind turbines and so help me God if you say one nasty thing to me, I'm going to give my business to someone else!"

"Mr. Green," the salesman said, "We wouldn't think of such a thing. I should point out however that if you buy 24 of the turbines, you would get a volume discount that will lower the price to the point that you are essentially getting 4 turbines for free."

"I didn't get no darned discount when I bought 24 last year," Ron said.

"No sir, you didn't," the salesman replied, "But you did get free delivery and installation."

"You mean I don't get free delivery and installation this year?" Ron asked.

"Get serious will you," the salesman replied.

"Who is your largest competitor?" Ron asked.

"I'm sorry Mr. Green, I was looking at the wrong computer screen, of course you'll get the volume discount and free installation and delivery," the salesman smoothly replied.

"I thought so," Ron said.

"This is Ron Green," Ron said into the phone. "I need 24 more of those 680kw diesel generators."

"Mr. Green, we anticipated your need and have 24 assembled and ready for delivery,"

the salesman at Cummins Power said. "Of course with that volume of generators you'll get free delivery and installation plus filters for 3 years and a large supply of spare parts."

"Same deal as last year?" Ron asked.

"Actually no Mr. Green," the salesman said, "There's a price change."

"Jacking the price on me, huh?" Ron said.

"Oh no sir," the salesman said. "You folks have bought 40 generators from us. That not only qualifies you for all of the accessories, but to a 10% discount on all future purchases."

"There's something familiar about your voice," Ron said, "But you're not the salesman I've been working with for the past few years are you?"

"No sir, he got a promotion because of all the generators he sold you folks," the salesman replied. "You recognize me from the wind turbine company. I never worked for a bunch of more arrogant people in my life, if you forgive me to speaking out of school. They had to go to a new discount scheme where regardless of the quantity you buy, you get a 16.67% discount, free delivery and installation and free parts for five years."

"You don't say?" Ron replied, "Free parts for 5 years?"

"Yes sir," the salesman replied. "When do you want these generators delivered and installed?"

"First week of June work for you?" Ron asked.

"First week of June is scheduled Mr. Green," the salesman said, and thank you for the order."

"This is Ron Green," Ron said. "About those wind turbines I ordered. You can take those wind turbines..."

"Excuse me for interrupting Mr. Green," the salesman said, "I've been trying to reach you. I'm new on this job and I'm afraid that I overlooked the fact that you're entitled to free parts for 5 years."

"I heard it was 10 years," Ron bluffed.

"I keep getting the wrong computer screen Mr. Green," the salesman smoothly replied, "You're right it's 10 years."

"I want you people down here the first week of June installing the equipment, fella,

which you darn well know also includes the control panels same as last year,” Ron said.

“The first week of June, Gee, I...” the salesman started to say.

“You keep a jar of Vaseline near your desk fella?” Ron interrupted.

“Yes sir, the first week of June,” the salesman said.

Ronald was fairly adept at dealing with people especially when he knew he was getting screwed and not kissed. LTA was now up to an electrical capacity of 43.2mw. Ron sure hoped that this finished off their electrical expansion; they were running out of places to put the turbines.

19. New supply building (Derek)
20. New wind turbines and generators ✓
21. New Community Center
22. 4 additional shelters instead if 2
23. Go fishing (maybe)

All About the Weather – Chapter 25 – Summertime and the Living is Easy

Not! At least not as far as Ron Green were concerned. Clarence and Gary rode their golf carts down to the new lake each day and they were catching some big fish. Ron was scampering hither and yon checking on all of the new construction. The snowfall this past winter had added about 7 billion gallons to the lake. And, Jim and company said that they would be able to divert water from as many as 20 sections this year. The new firemen were all LA County people looking to get as far from California as possible and they even included a pair of Paramedics. The paramedic ambulance that Ron had purchased was more like the Paramedic ambulances the City of Los Angeles used than those fancy pickup trucks that LA County still used (remember squad 51?). But, it was an easy adjustment for the people they hired.

Lakes have to have a name and this one was called Los Tres Amigos Lake. I wonder why? Anyway the walleyes were large and tasted great. The 4 new underground shelters went in without a problem and that was a turnkey project so Ron was good there. The farm crews planted 20 sections of canola for oil, 20 sections of canola to produce the hybrid seed and another 20 sections to produce heirloom seeds. In this way, they could get by for the future by using a single section to produce the hybrid seeds and another to produce the heirloom seeds. Seeds will keep for a long time if properly stored and following Ray Garst's advice, Ron had a seed storage facility constructed in addition to all of the other buildings.

Ron did manage to get to the lake on weekends; all work and no play did make him rather dull. Gary and Clarence could have helped out some, darn their lazy butts, but no, they went fishing 7 days a week. The leisurely summer seemed to mellow them out quite a bit, however, and Ron vowed that come the summer of 2020, he was going fishing all summer too. Derek seemed to have quite a head on his shoulders and around about July, Ron had enough. Effective July 5, 2019, Derek Olsen was now the General Manager of LTA and Ronald Green was officially retired. Everyone took the 4th of July off, as usual, and they had a magnificence picnic. There were baby back ribs, hamburgers, hot dogs, chicken, steaks, 50 varieties of salads, cold kegs of Milt's homebrew, watermelon, and even a small fireworks display.

Derek Olsen was at heart two things. He was a tank commander back in his Iowa National Guard Days and he was still a tank commander at heart. But even more than that, Derek was a specialist when it came to logistics. Ronald had overlooked something very important, milk bottles. Or, plastic jugs in the ½ gallon and 1 gallon size. Derek had suspected as much because Ron hadn't ordered any jugs or a plant to produce them. Derek had been doing some research and had a good overview of milk and other information relating to the packaging of milk so he was ready to go. He ordered the machinery and molds and the HDPE resins. These he installed in a small, quickly erected, insulated steel building. Now they were in the milk business. Since he already had a plastics operation, he added an injection molding operation to make the pails and lids for the ice cream products.

Jed had acquired several good used refrigerated semi trailers and some Petercars to pull them. It turned out that processing milk wasn't quite as easy as everyone had hoped, but perhaps that was just the newness of the venture. The milk had to be standardized and pasteurized and homogenized and bottled and cased and loaded. And the extra cream that came from producing skim milk was added to the butter making process. Top that off with the cottage cheese manufacturing and you had a pretty fair sized operation and that didn't even count the cheese they were making. Of course a whole lot of the production never left LTA, it was consumed right on the ranch. No, they weren't big enough to be their own country, not by a long shot, but LTA was more than ever a completely independent ranch. Derek also came to realize why Ron looked tired all of the time, running LTA was a 14-hour a day job, even with all of those subordinate managers.

The snow started to fall early, on Labor Day, forcing the picnic indoors. But, there was lots of room in the new community buildings and no one complained. Derek had considered the starkness of the community centers and had made a few changes. One could almost identify the four building by their brand of music. The 30's to 60's music was his Dad's group. The 70's and 80's his music. The 90's the next younger generation and the entire rap crap belonged to the people 25 and younger. Well, except for his sister Amy; she liked that rap crap. The bars and snack kitchen installed in the community centers likewise tailored their fare to the age groups. There was some of that pretty good homemade whiskey and the homebrew in the old folk's home, as he called it, the wines they were beginning to develop despite the short growing season in his community center and so forth. The rap crap group was limited to soft drinks, even though some of them were old enough to drink. Lena Horne seemed to be a perennial favorite at the old folks home with Roy Orbison bring in a close up second.

*Don't know why there's no sun up in the sky
Stormy weather
Since my man and I ain't together,
Keeps rainin' all the time*

*Life is bare, gloom and mis'ry everywhere
Stormy weather
Just can't get my poor self together,
I'm weary all the time
So weary all the time
When he went away the blues walked in and met me.
If he stays away old rockin' chair will get me.*

*All I do is pray the lord above will let me walk in the sun once more.
Can't go on, ev'ry thing I had is gone
Stormy weather*

*Since my man and I ain't together,
Keeps rainin' all the time*

The Billie Holiday song, later recorded by Lena Horne, a favorite of Clarence, competed with:

Dum-dum-dummy doo-wah, ooh yay, yay, yeah
(Oh, oh oh oh oh ooh-ah-ah, only the lonely, only the lonely)

Only the lonely (Dum-dum-dummy doo-wah)
Know the way I feel tonight (Ooh yay, yay, yay, yeah)
Only the lonely (Dum-dum-dummy doo-wah)
Know this feeling ain't right (Dum-dum-dummy doo-wah)

There goes my baby, there goes my heart
They're gone forever, so far apart
But only the lonely know wh-y-y I cry--only the lonely
(Dum-dum-dummy doo-wah, ooh yay, yay, yay, yeah)
(Oh, oh oh oh oh ooh-ah-ah, only the lonely, only the lonely)

Only the lonely (Dum-dum-dummy doo-wah)
Know the heartaches I've been through (Ooh yay, yay, yay, yeah)
Only the lonely (Dum-dum-dummy doo-wah)
Know I cry and cry for you (Dum-dum-dummy doo-wah)

Maybe tomorrow a new romance
No-o-o more sorrow, but that's the chance
You've got to ta-a-a-ake, if your lonely heart breaks
Only the lonely (Dum-dum-dummy doo-wah)

A favorite of his Dad; as was all of the '50's music and most of the '60's music. His Dad had more than one story he told about '50's music. Apparently his brother's name came from a song sung by a group from West Germany. But strangely his Dad liked most of the music that Clarence liked, although the reverse wasn't necessarily true. There was a side to his father that few saw. It was the melancholy. And the loneliness that went with his dysthymic disorder. And, most times, it only reared its ugly head when the music was just right. Then, his Dad would get that lost look in his eyes as if he were remembering all that was and all that could have been. Derek had noticed that certain songs were more likely to invoke that behavior, but when he'd tried to remove them the jukebox, his Dad had all but threatened to smash in his face. Oh well.

The winter of 2019-2020...

Winter came fast and winter came hard in the fall of 2019. The new biodiesel production setup very quickly processed the canola into oil and the oil into biodiesel. Which was very good, considering how fast the wind turbines shut down and how long they stayed down. Since this was a corporate entity and not a municipality, the final word on all matters affecting the community came from the shareholders and there were only 6 share-

holders of LTA, the three old geezers and their wives. Every single member of the community had been told, more than once, that the community was a corporation and that while the corporation might be democratic in nature, it wasn't a democracy.

Nearly every family here, save blood relatives, were employees of the corporation and as such they shouldn't be expected to get a vote on critical matters affecting the corporation cum community. Sometimes, people tended to forget but the reminder usually came in the form of a letter outlining the duties and responsibilities of the employees of the corporation. Employees, it should be remembered, received free housing, free medical care and food and fuel at cost or very little above cost, as the form letter pointed out in capital letters.

Thus, when a decision had to be made to cut electrical production and people were forced to move to the community centers or underground shelters, the vote was 6-0 and no other votes counted. At least in the shelters and community centers, the company provided the food. And except for those people who tended to the animals, and the folks who kept the roads and hydrants clear, no one was required to leave the relative comfort of the facility until the emergency had passed. It was at this juncture that our friends realized that the gradual worsening of the weather would require them to install a tunnel system linking all of the community buildings from the garage and firehouse to the hog house. Community buildings that didn't have a basement, as was the case with some of the storage facilities, would have to have a stairwell cut into the floor that led to a tunnel. The three old geezers sort of had a three-stage system not unlike the smog alerts that California used. Stage 3 was the bad one, requiring everyone to turn their furnaces to 55 degrees and their hot water heaters to low or off. They were nominally at stage one all of the time with thermometer setting limited to 72 degrees and hot water to 140 degrees and at stage 2, it became 65 and 125. Stage 2 occurred a lot during this particular winter and stage 3 happened every time a blizzard shut down the wind turbines for more than 24 hours.

They hadn't wanted to do that, invoke stage 3, but with all the people and the demands on the generators, it was a necessary evil until they had all 10-million gallons of fuel stored. Even then, they could have problems. 64 generators burning 49 gallons per hour for 24 hours used 75,264-gallons of fuel. Do that for a month and it was 2¼-million gallons of fuel. By cutting back during the extended outages, they cut their fuel consumption by at least 75%, perhaps more. And even when they had all 10-million gallons, they were only good for 4 months without the stage 3 provisions. There was however a limit to how much fuel they could produce and store. In 1999, the average driver used about 690 gallons of gasoline per year. If one assumed that the average motorist drove a car for 60 years, then the average motorist only used 41,400 gallons in his or her lifetime or about ½ what it took just to run those 64 generators for 24 hours. That's downright spooky when you think about it. Of course they didn't run all 64 generators at once, but still...

They ended up in stage 3 extending more than 24 hours 4 times that winter. Nothing new was planned for the coming summer except to finish the projects that were incom-

plete, like the 32 additional silos for example and to grow a full 60 sections of canola for oil and meal. The 2019 production had been 20x640x42 or 537,600 bushels $\times 1.05 \times .8$ yielding a little over 450 thousand gallons of fuel. Add to that the net surplus from the prior year of roughly a million gallons and they only had 1.5 million gallons available for the winter. They had burned off about their entire prior year production by the time spring rolled around and still only had a million gallons of fuel. But 60x640x42x1.05x.8 would increase their supplies by 1,354,752 gallons less whatever they used through the summer. For the sake of argument, and since this was before production and usage, they looked to have on the order of 2.1 million gallons available for the next winter. The bottom line seemed to be that it could take up to another 8 years to fill the tanks and that was a lot of breath holding.

The stage 1-2-3 system was going to be around for a long time. Sometime after the first of the year when they were getting serious about the coming season, Jim and company pointed out that this would be the last year for them redirecting water from the bare sections of ground. It looked like they would be about 5 generations away from a full reservoir, but that sure beat 30 centuries. They would end up adding about 10 billion gallons of water to the lake every year. Not bad, all things being considered. If their health held, at least the three geezers should live to see the end of the 1-2-3 system. But wait, that assumed no untimely interruptions like a war or something like that. Still, they were doing pretty darned good for three old armchair survivalists from Palmdale, California now weren't they?

Authors Note: A bushel of soybeans weighs 60 pounds and yields about 48 pounds of meal. That means that 1-acre of soybeans @ 42 bushels per acre yields about 1-ton of soybean meal. Somewhere during the recounting of this adventure, your author lost sight of that fact. Let's examine the coming few years of production of 60 sections of canola meal. Each section will yield 640 tons @ \$450/ton = \$288,000. Since they will be planting 60 sections of consumable canola beans per year, their annual production of meal will be worth $\$288,000 \times 60 = \$17,280,000$. Assuming they will consume about \$7,280,000 of the meal each year, their bank account will grow by about \$10 million per year less their operating expenses. Two sections will be set aside for the livestock use and will be used to produce seed for the coming years.

Canola, a variety of rapeseed was developed in the early 1970s in Canada. It had low acid which made it an ideal meal for livestock and an ideal vegetable oil for human consumption. According to Journey to Forever, a biodiesel website, rapeseed/canola general produced 127 gallons of oil per acre in normal times and 80% of those 127 gallons (~102 gallons) became biodiesel.

Endnote

Spring, 2020...

This year, they planted 60 sections of canola, 6 sections of corn and 2 sections of canola hybrid seed production. They also planted 3 sections of alfalfa, leaving two sections

for pasture. They experienced another record snowfall of 18' of snow. At this time, 20 sections of ground drain 66% of their water into runoff with the remainder being absorbed by the soil and one section, the lake, captured 100% of the water that fell on that section.

All About the Weather – Chapter 26 – End of the Beginning

Back in the days when Derek was processing the biodiesel, the subject of storage of the soybean meal had come up and had been tossed around. The temporary solution that had worked for a long time was to let the meal pile up and when a silo was empty, refill it with meal. Then, the silos were emptied as the meal was sold off or used up. Later, a building had been constructed along with the other new farm buildings just to store the meal they wanted for their operation. Since they were going to be producing huge amounts of canola meal during 2020, hopefully, Derek had a problem. They fed their cattle canola meal and finished their pigs with the meal. Derek contacted the people at Harvestore and asked them what the chances were they could increase the number of silos to be put in during 2020.

Harvestore had been looking at its projected sales for the coming year and they looked to be down. They were interested in anything Derek might propose. Derek proposed that they put in 64 instead of 32 silos during the coming summer. They told Derek getting the silos wasn't a problem, they'd kept their manufacturing up, but they weren't sure about installation. That was a lot of silos at one location in a pretty short time. They would have to get back to him on that in a couple of weeks. Then Derek contacted the contractor who had put in the hog confinement facility and asked if he could double its size during the summer of 2020. He could, he said, but only because he'd lost out on a building that he'd bid on and had been counting on. Derek's call was a blessing, he said.

Derek made two more calls, one to the Pacific Northwest where he contracted for 1,000 Black Angus cows, 100 bulls and a bull semen processing operation. One bull could service a lot of cows, but only a Vet or a skilled technician harvested the semen and the cows were artificially inseminated. Derek's finally call was to purchase 120 head of Holstein milk cows. Those 3 bulls could service all of those cows by switching to artificial insemination. Although not a farmer, never had been and never would be, Derek had gone to school with a lot of kids from the farms in central Iowa. Because of this Derek recognized another problem with the operation. They were baling the hay, requiring far too much storage space. The internet gave him the information he needed to switch to field pelletizing of the alfalfa. Compressed into small cubes, wafers or briquettes, the hay was easier to store and handle.

Derek only had six sections to work with at the livestock operation and 2 of those were lost to reproducing the soybean seed and another to the facilities and dry lot. Somehow, he had to increase the production on the remaining 3 sections that grew the alfalfa. The ground actually produced 2½ cuttings, but in years past they had not harvested the 3rd, immature cutting. With pelletizing, he could get that extra ½ crop of hay. And although Ray Garst now had 75 sections of land in his name, it was more than he could use. Derek asked if he could use/rent 2 sections of the land in future years for their seed reproduction, he really needed the extra 2 sections for alfalfa. Ray told Derek he was welcome to it until such time as Ray needed the land.

When Harvestore finally called back they advised Derek that they could handle up to 72 silos that season, drawing on their national dealer network. In the interval since Derek had called them, he'd done some quick math on how much corn he'd have to deal with from those 3 sections of corn for alcohol and feed production. It was on the order of 192 thousand bushels and that corncrib overhead couldn't hold that much. But 8 extra silos would give him storage for 120 thousand bushels of shell corn and that solved his problem. He told Harvestore he'd take all 72 silos. Here he was working 12 hours a day in the winter going into the spring; Derek began to wonder what the summer would bring.

Summer 2020...

Jim and company were off working on their last 10 sections of water redirection. Harvestore brought in crews from all over the country and set up large tents and a field kitchen to handle the huge number of silo erectors. Derek bought the pelletizing equipment and it was delivered well in advance of need. A long convoy of trucks delivered the new cattle and a portion of one of the supply buildings was set aside for the semen operation. The 5 cousins indicated that they were going to need more help with the additional livestock and had 24 cousins looking for work. A flurry of calls resulted in more basements, streets with curb, gutters and storm drains, 24 additional doublewides, street lighting, fire hydrants and so forth. By this time, it seemed that everyone was getting accustomed to LTA calling up at the last minute needing things.

Jack didn't even need to be told to order more MIAs, he'd overheard Derek ordering the 24 doublewides. By this time Surefire was giving Jack an extra 2% discount, and had he not absolutely forbid it, would have touted him as a major law enforcement supplier. Jack was even forced to locate more 7.62 ammo to get the supply back up to 5,000 rounds per rifle. And Jack was fascinated with the hog confinement operation and spent a lot of free time watching construction of the new building while making sure to stay upwind all of the time.

The cousin in charge of the horse operation came to Derek with a suggestion and a request. Over the years, the herd had grown by leaps and bounds and very few people rode. Figure the herd doubled every other year and they'd had those horses for a long time. Anyway the suggestion was that they consider forming a mounted Cavalry. There were plenty of horses and plenty of people, all he needed was tack. The cousin had gotten the idea from that old timer, Clarence, who had said something about the 10th Cavalry.

What he wanted was McClellan saddles, rifle scabbards for the MIAs, saddlebags and bridles. The company surprisingly was still in business and Derek referred the cousin to the website and told him to get whatever he thought he would need to equip the herd. It was another kid in a candy store with \$100 bill. But, they had everything they needed to mount a Company of Cavalry except for the 'Long-knives'. Our Navajo friend wasn't about to equip all of those 'white-eyes' with sabers, too. He did, however find some reproduction covered wagons to complete the equipment for the Company.

When Jack heard about the cousin's Cavalry project, he called up Springfield and told them he needed 300 standard, mil-spec M1911s. They had been concentrating for these past years on long arms and were woefully short of handguns. In fact, Jack spent a lot of time on the phone locating flap holsters, USGI surplus 7 round mags and a good source for the .45ACP cartridges. They might not look like a Cavalry Company, devoid as they were of uniforms, but they'd be pretty well equipped. The Gatling guns would be replaced by the venerable Ma-Deuces, the trapdoor Springfield's with M1As and the Peacemakers with M1911s, but if they could find time to train, they'd be a force to be reckoned with. Once the construction projects were all well underway and everything began to come together, Derek found that he could cut way back and only work 12-hours a day. By the time that the Independence Day celebration rolled around, the construction projects were nearing $\frac{2}{3}$ completion.

04Jul2020...

"Frankly Ron," Derek said, "I don't know whether to thank you or strangle you."

"Derek, I'm going to be 79 years old in September, don't you think it's time I got to slow down?" Ron chuckled.

"I don't know how in the hell you did it working until you were 77 years old," Derek admitted. "I'm only 46 years old and it's almost more than I can handle."

"Frankly, I don't know how I did it either Derek," Ron admitted. "I guess I was just so busy I didn't have time to stop and think about how old I was getting."

"Clarence," Derek said, "It looks like you're going to get your wish. I authorized the purchase of some McClellan saddles and tack so we can put together a mounted Cavalry next summer when things die down to a dull roar. I don't suppose we'll paint on black-face, so we can't really call it the 10th Cavalry though. Have any suggestions?"

"Well, when you were in the guard, you were part of the 7th Cavalry so let's just call it the 7th Mounted Cavalry," Clarence suggested. "You going to have some Gatling guns, too?"

"We were going to use the Ma-Deuces," Derek replied.

"A Cavalry Company needs Gatling guns to be authentic, Derek," Clarence responded.

"Maybe I can help out here fellas," Jack interrupted. "We're long on 7.62mm belted ammo, maybe I can run down some Dillon M134 7.62mm Miniguns for that Cavalry unit of yours."

"See Derek," Clarence said, "That would make it a real Mounted Cavalry unit."

"Well, I suppose," Derek agreed. "They took those reproduction wagons and got rid of

the axles and wooden wheels and replaced them with steel axles and balloon tires. I guess we might just as well have some carriages fabricated to carry some Miniguns. Personally, I'd rather have a good old fashioned Abrams tank, but we might just as well carry this Mounted Cavalry idea to its bitter end. At least we have draft horses to pull the wagons."

After the holiday celebration, Derek looked into their livestock feed production system. He discovered that the diet for the animals wasn't as balanced as it should be and discussed it with the Vet. The Veterinarian had a couple of suggestions. Next year, they should plant timothy on one section and pelletize it. It was better for the horses. They should also plant one section of oats to balance out the ration. Derek was amenable to the Vet's suggestions, but he really needed 5 sections of alfalfa. They would just borrow a couple of sections from the BLM for the oats and timothy. As the various projects were finished, Derek paid off the contractors and LTA slowly returned to quieter days. LTA was sure a lot different now than back when it had been a little 20 acre spread, wasn't it? The map on the wall looked more like a map of the Ponderosa. Or, had that ranch really been that big? (Ponderosa was 640,000 acres, 1,000 sections.)

o

Harvestore was still finishing up the silos when the harvest began. No one had stopped to think just how far they had to haul the harvested beans to get them to the silos either. Wagons and tractors were totally out of the question and they used the Petercars and acquired grain trailers. If the Iowa farm folks hadn't transported all of their farm equipment to Arizona, the harvest would have been impossible. As it was, it was a major challenge. They barely had everything harvested and put up before the snows came. And, the weather reports didn't look good for this winter either. Faced with this circumstance the three old geezers were ready to go to stage 3 at a moment's notice.

The yield was consistent, generating 120 gallons of oil per acre on the canola and 100 bushels per acre on the corn. Hopefully, they could count on getting the same yields for several years to come. But, farmers all thought that next year was going to be as good or better than the past year, didn't they?

Winter 2020-2021...

Jed fashioned up carriages that he thought would be appropriate for those Miniguns if Jack ever managed to come up with them. He fashioned a large box on the carriages, too. It wasn't much thicker than a 7.62mm ammo can, but it was 4' wide and 2' high. He experiment putting linked 7.62mm ammo in the grossly oversized ammo can. It would hold 30 cans of linked ammo. Jed figured that he must have missed the report of the armory robbery on the news because he was totally shocked in December when Jack presented him with 4 Miniguns. Jack also had some of that flexible feed and 4,400 round ammo cans for the guns; alleviating the problem Jed had trying to get the ammo to smoothly feed from the oversized ammo box.

One of the many shortcomings of the American populace was its hunger for meat. Over the years, companies like Archer-Daniels-Midland had been producers of textured soy protein products. A lot of the so-called meat products one bought in the grocery stores were up to 25% vegetable protein. The conversion of soybean meal into meat by feeding livestock was a highly inefficient process. The meal was from 50% to 65% protein in and of itself. During the winter of 2020-2021, Derek began to look into producing textured soy protein products.

It occurred to him that if he could convert the soybean meal into TVP he could get a lot more money for that meal. A whole lot more! He learned that all he needed to do was install an extrusion cooking plant to convert the soybean meal into TVP. It wouldn't seem right not to have some sort of construction project going, so Derek located a manufacturer and contracted for the equipment. He then called on one of the building contractors LTA used a lot and said, "Hi, it's me again..."

The US government was by this time desperate for manufacturers of TVP because many of the previous producers were up north and the climate had essentially eliminated their raw materials, the soybeans. New operations were just beginning to start up in the south and the government was offering major incentives to companies who got into the business. The incentives made the project all the more attractive. Derek couldn't expand the herds anymore because there wasn't much more BLM land available and he doubted that the tribes wanted LTA on their Reservations. Derek was another generation that was learning Gunny Highway's advice.

LTA was not in the market for any more residents either. With their existing population, they considered themselves to be just about their maximum size. There were all the offspring of those 300 some families and that would be enough population growth for this community. In fact, was it not that there wasn't any place better to go; they sort of figured they would have started losing young people by now. But LTA was a good place to be during the winter of 2020-2021. And the snowfall was as heavy as the prior year but without the winds. They never did have to go to stage 3 alert for more than a few hours at a time. Derek had disregarded the geezers' refusal to increase the battery bank and when the batteries needed replacing during the previous summer had added huge submarine battery banks in the basements of the community centers where the generators were housed. He had them up to 12-hours at stage 3 conditions and intended to get that to 24-hours during the summer of 2021.

All About the Weather – Chapter 27 – The 7th Mounted Cavalry

Los Angeles Times, 15Aug04:

“The December 2001 National Intelligence Estimate on ballistic missile threats, which advocates of the new system cite as their justification, predicted that several countries could use ships off the US coast to launch missiles – cruise missiles, that is – that would sneak under the currently planned antimissile network. In fact, any homeland security expert will agree that US ports and maritime approaches are the most vulnerable.

“It is here, however, that missile defense becomes a serious menace to American security.

“First, in the cases of North Korea and Iran, rather than focus on carrots and sticks to eliminate their missile threats, an antimissile system is likely to provoke them into increasing their capabilities so as to improve their chances of penetrating US defenses. After all, from their perspective, in the age of US preemption the ability to strike the United States and its interests is their deterrent against becoming another Iraq.

“Second, in the case of China and Russia, a more capable missile defense – augmented by airborne and space-based lasers, high-powered microwave and optical weapons, cyber warfare and new hypersonic precision conventional weapons – will ultimately undermine the balance of terror that still governs the large nuclear arsenals.

“Here is the kind of fantasy reasoning that drives the ideologues pushing missile defense: During last year's ‘Total Defender 03’ war game, held to practice an integrated missile defense of the United States, the scenario used by the military posited a frightening Iranian ballistic missile threat in the year 2017.

“The postulated adversary had some limited number of intercontinental and intermediate-range ballistic missiles, as well as a robust force of medium- and short-range ballistic missiles,’ says a briefing on the exercise. ‘The adversary was also assumed to have some limited number of nuclear warheads for this ballistic missile force.’

“It's 2017, and proponents of antimissile systems ask us to believe that, in the post-Sept. 11 era with an avowed policy of preemption, Washington has stood by for more than a decade as Iran developed an intercontinental missile capability and deliverable nuclear weapons. I don't think so.

“The truth is that missile defense has become another case of fighting the last war instead of focusing our talent and resources on the next threat.”

So, some of the liberal press thought that the US shouldn't be prepared, huh? Are you surprised? Maybe that guy should have read the scenario that Washington had read and chosen to ignore. The year 2017 had come and gone and the US had never fired those missiles, so did that mean that they weren't needed? Or, did it mean they de-

tered an otherwise motivated enemy from attacking the US for its food? And, therein lays the fundamental conflict that arises over deterrents. If they work, they are never used and if they're used, it means that they didn't work, right?

Anyway, there wasn't all that much activity during the summer of 2021. Derek had learned from Ron and just bought up a used plant and contracted out the installation as a turnkey project. They were still using the no till approach for the crops and they found lots of time to form the Cavalry unit and practice. Someone had come up with a military manual from around the turn of the 20th century and they used it as a guidebook for training. But the manual only covered the formations and such and didn't give them a clue about unit designations. Of the over 500 people at LTA, about 225 signed up for the '7th Cavalry'. They decided to use the Army designators squad and platoon with the whole outfit being called a Troop (Company). They didn't need to relearn a new set of names if they did that. First, they needed to teach the men to ride and then teach the horses to obey. After that, they had to get those horses over being gun shy. Men and horses that couldn't learn were replaced. They had 4 platoons of 50 men each plus the 4 3-man gunnery units. Ten men drove wagons and three served as cooks. They probably might have done better, but there was hay to cut and lots of little chores that kept interfering.

By the time they had to knock off for harvest, however, they were a reasonably disciplined group of men and horses. The real savior came in the form of an idea Jack hatched. They had suppressors for the MIAs and he thought he could adapt the Miniguns to use the Surefire machinegun suppressors. It worked very well, in fact better than expected and the horses became easier to handle. They had to keep the Miniguns set on their 2,000 round-per-minute setting to avoid excessive vibration, but it was doable. Then Jack suggested that he spend the coming winter fitting suppressors to the M1911s. He was able, by virtue of his class III license, to order the barrels and suppressors from the same manufacturer. Then, he got a letter from the ATF and he replied that the barrels and suppressors had never been delivered. Apparently, they had been stolen in route to Arizona. The ATF sent an investigator, but between Steve, Milt and Jack, they convinced the guy the goods never arrived. And, of course, Jack refused to pay for the suppressors and barrels he claimed never to have been received.

The sight of 200 mounted men plus 10 wagons and 4 mounted Miniguns was something you had to see to appreciate. Some of those farmer's favored bibbed overalls and some favored jeans and a flannel shirt. It was reminiscent of that Dolly Parton song, 'Coat of Many Colors' to behold the troop. Not that it wasn't orderly, well disciplined and drilled, because it was; but the troop looked like a bunch of misfits, playing Cowboys and Indians. Oh yes, the cousins signed on to be a separate 'scout' detachment, I almost forgot. On the final day of training, when the troop passed in review, Clarence stood and shook his head. The 7th Cavalry Troop just wasn't the 10th Cavalry. And then it occurred to him that they needed uniforms to look the part. Given the diverse background of the men who made up the troop, they couldn't use blue and they couldn't use grey. In the end, they went with BDU's and Aussie cowboy hats with the rolled up brim. Clarence went along with the BDU's, but in his mind, it just wasn't the same. The men would nev-

er be a 'real' Cavalry Troop until they wore those blue uniforms.

According to Aaron Brown on CNN on the broadcast of September 17, 2021, a NATO Orion P-8 ASW aircraft, on routine patrol out of Bremerton, WA had a 'definite contact' causing NATO to sortie Perry class Frigates and Burke class guided missile Destroyers to search for the unidentified submarine. Attack submarines based in the Bremerton area had also been dispatched, but CNN had no information on how many or which submarines. Gary had to admit that Brown looked pretty distinguish with grey hair. At the same time, this had been the first military alert since the formation of NATO and everyone wondered what it all meant.

The harvest during the fall of 2021 varied less than 5,000 bushels from the harvest of the previous year. They had planted soybeans, too. This time however, the soybean meal wasn't going to be sold off. Instead, the new TVP plant would process the meal in those extrusion cookers and bag it for sale in 50# bags. Having acquired the equipment so cheaply, Derek expected to recover his investment in 3 years or less. The government incentives amounted to \$0.50 per bag or a penny a pound. There was a nominal loss in weight due to the cooking process, and the going price for the TVP was \$1.50 per pound. This was going to be a very rewarding year financially. Derek was also re-thinking whether he should sell off most of the beef cattle and cut the herd. When he could make a profit doing so, he decided, that was exactly what he intended to do.

Clarence was trying his best to drum up support for changing the uniforms from BDU's to the Union Blue uniforms of the late 19th century. His friends, the board, refused to take sides telling Clarence that if he could get all 225 of the troopers to agree, LTA would pop for uniforms from a costume store. So, Clarence began a campaign in an effort to get the necessary 100% support. It was harmless fun and a lot of folks enjoyed seeing the 82-year-old man trying to get people to agree with his viewpoint. Gary and Ron had visited with the troopers and they didn't care one way or the other, the Civil War had been over for 155 years. In fact, Ron had Derek order the reproduction uniforms. Everyone was having a great time shining Clarence on. Although the Troop was legitimately trained as a mounted fighting force most of the men had joined more for a lark than anything else. They essentially considered themselves to be an armed drill team. Poor Clarence was 'allowed' to convince the men one at a time with the last man caving in as a Christmas present.

The snow fell steadily but without the continuous heavy winds of the prior winters. They got to stage 3 a few times, but the batteries were enough to tide them over. And for the first year since anyone could remember, there were no more construction projects scheduled for the coming summer. LTV had money in the bank, water and fish in the lake, soybeans to process, oil and meal to process, canola to process, corn to process into alcohol and the 12,000-gallon tanks were full and the first 3-million gallon tank was filling up. At this rate, 5 years down the road, they looked to have nothing to worry about. What's more, with the positive glut of fuel on the market, if push came to shove, they could fill one or both of those other large tanks with real diesel. Without realizing it, somewhere along the line they had turned into environmentalists and preferred to avoid

that alternative if possible. The government had filled the National Petroleum Reserve and every tank and bunker in the country, perhaps except for their 2 3-million gallon tanks, was full.

During the first week of November, CNN did a follow-up on the ASW sighting reporting that the Frigates, Destroyers and P-8's had been unable to reestablish contact with the unidentified submarine. They also reported that for some as yet unspecified reason the DHS had raised the threat level to Yellow and the military was on DEFCON 4. Derek had a quiet discussion with Ron when he caught that news broadcast and they began to pump 600,000 gallons of biodiesel into each of the two empty tanks. Although the snowfall was steady, it was possible for truck traffic to move and Derek also quietly ordered 4.8 million gallons of #2 diesel fuel. By mixing the diesel and the biodiesel in a 4 to 1 ratio, he was producing the popular B-20 mix used in most trucks these days and hedging his bet. His military instincts told him that they might not have those 5 years and Steve agreed with him.

The petroleum companies were taken by surprise at the order for 4.8 million gallons of diesel. LTA had never purchased diesel fuel that anyone could remember. They now wanted a few trainloads of fuel and they wanted it quickly. 25 days later, the bunkers were full and LTA's checking account was lighter by \$13.2 million. And Jack, alerted by the sudden appearance of a new tanker every hour for 12-hours a day started to look over their supplies. They had 1 M1A, 1 M16 and 1 M1911 pistol for each family. Most people also had some personal weapons, usually a .22 and a 12-gauge shotgun. Iowa happened to be a state where one could only hunt deer, the only large game, using a bow and arrows or a shotgun. Therefore there wasn't an overabundance of .30 caliber rifles among the Iowans.

Because Derek had spent a month filling the empty bunkers, the summer of 2022 would only require them to plant 20 sections of soybeans, 20 sections of canola and 2 sections of corn. This would top off the first 3-million bunker and cover their usage during the summer. They would go into the fall of 2022 with 10 million gallons of vegetable oil to process into biodiesel. That would free up 21 sections of ground and allow them to move the seed reproduction away from the livestock acreage. Those 2 sections would be used to load up on more pelletized alfalfa. Derek also decided to cut the beef herd and extend their feed resources in the process. The Army had put out a new contract for beef and this was an ideal time to unload ½ of the beef cattle. Apparently the Army didn't believe in feeding its soldiers TVP. Derek also called for a special meeting with the three old geezers, plus Steve, Milt and Jack.

"I talked to Ron and we decided to fill up the fuel tanks with the B-20 mix," Derek explained. "Frankly this business with that submarine contact has the small hairs on my neck standing up. We'll only put in 40 sections of soybeans and canola this coming summer because that will cover our usage and leave us with full tanks. I'm cutting the herd and increasing our stock of livestock feed, too. Jack, how do we stand in terms of arms and munitions?"

"I've been checking Derek," Jack explained. "We have one each of the 3 mandatory arms per household. I'd like to add another 200 MBR's, Assault Rifles and Pistols if everyone agrees. Ammo wise, we're in pretty good shape, but we could stand a little fill in and if we do buy the additional weapons, we're going to need ammo for them. We had plenty of grenades and the like when we had a smaller population, but with over 500 people here, we could stand some additions."

"Unless someone disagrees," Derek said, "Contact Springfield Armory and order the Loaded M1As and M1911s. You're going to have to reach out and touch someone on the M16's and grenades. I'd suggest that you also add 2 or 3-dozen M203s and more of the 40mm HEDP rounds. This may sound dumb, but what do you think the chances would be for you to pick up a couple of those Mark-19's and some more Ma-Deuces?"

"All I can do is put out the word and hope, Derek," Jack replied, "I've never tried to pick up a Mk-19 before. Of course if I can get them, we're going to need a truckload of the linked grenades, too. If you don't mind my asking, what do you intend to do with the Mk-19's?"

"Our horse cavalry doesn't have any artillery and I was thinking of getting Jed to make some mounts for the Mk-19's like he did for those Miniguns," Derek explained. "That is assuming you can get us some."

"How many do you want?" Jack asked.

"Maybe 4, the same as the Miniguns," Derek said. "Steve, can you think of anything Jack ought to get?"

"C-4, detonators, and more LAW rockets if they're available," Steve suggested.

"What about you Milt?" Derek continued to poll.

"MRE's for quick meals in a pinch," Milt suggested. "If we do end up fighting, the fellas can carry a couple in their saddle bags."

"Anyone else?" Derek asked.

"I heard someone suggest putting scabbards on the horses for the LAW rockets," Clarence commented.

"We got the uniforms at Deer Ridge if I recall Clarence, but I can't recall seeing any LAW's scabbards," Derek said. "We got most of the tack from Four Winds and they had the scabbards we bought, but no LAW's scabbards. But if you want to go on the net and look around, you can check around or just do a search for LAW's scabbards, I suppose."

All About the Weather – Chapter 28 – The Great Scabbard Hunt

The idea of carrying a LAW rocket, although meant as a well-intentioned humorous comment was, nevertheless, not a bad idea. Clarence took Derek's advice and searched the web. He found nothing to do with LAW Rocket Scabbards. Clarence guessed they could always make up something out of nylon if they weren't yanking his chain.

Jack added the things that everyone suggested, and put out the word on the military hardware. The fact that the military was on DEFCON 4 concerned him in that the heightened security might present a problem, but they had their needs and all he could do was try. Springfield Armory, on the other hand, had been running extra shifts, anticipating a surge in demand and they promised to ship within 24-hours. Next, Jack got on the phone to the people on his list of surplus arms and ammo suppliers.

He readily tracked down 800 mags for the M1911s and 4,000 M-14 mags. Surplus ammo was very difficult to find, however. Australia wasn't selling of the 7.62 anymore and there wasn't any surplus 5.56 available. The same could be said for the .45ACP. To this point Jack had avoided the larger ammo dealers like Eric the Ammoman, the Ammunition Store and Cheaper than Dirt. Eric told him he was taking some of his stock and heading for the mountains. He had about 100 cases of 7.62 if Jack wanted it but there was no more free shipping. Jack bought the ammo. The Ammunition store had .45ACP and Jack bought them out. Cheaper than Dirt had 220 cases of 7.62 and Jack bought that, too.

There was no news of any armory thefts, but the guy Jack went through called back 3 weeks later and said that he'd had a call from some Army supply Sergeants who were putting in their papers and getting out before things got too hot. Jack, he suggested, would be very pleased indeed with what they had to offer, but the price was going to be high. Jack said that 1) he didn't care about the price; and 2) have them deliver the goods directly to LTA. He'd see to it that his contact got a 'finder's fee'. These two guys ended up having more than Jack wanted, but he figured he could unload that 9mm ammo. The two Noncoms worked at an Army depot and they had things that no one had even considered like the AN-M14 TH3 grenades and smoke grenades in every color for the 40mm M203s. They had M136 AT-4's in abundance and LAW rockets. They had 8 not 4 Mk-19's and a half dozen Ma-Deuces. Jack figured that these guys had been diverting stuff for years because there was no way they could have put together 6 semi loads of stuff in 3 short weeks. And the two Sergeants weren't particularly shy when it came to price, either. There was a war coming, they claimed, and no one was going to see any more military hardware for a while.

Dealing with men like those Sergeants was always unpleasant, but, when you were in the market for things that could only be acquired through the backdoor, you usually ended up dealing with people who would only make the social register in Leavenworth. About the only thing that Jack was low on after he'd unloaded and inventoried the contents of the semis was 7.62 ammo. Not the linked stuff, there was plenty of that, but the

stuff in the 5-round stripper clips. Jack went back through his list, trying to reach the people who hadn't answered their phones the first time. Finally, he scored 700 cases of the 7.62 and his inventory was up to date and complete.

Jed had started the carriages for the Mk-19's when Derek told him he'd asked Jack to try and locate some of the weapons. Everything worked by the time he was done with the project. Steve said that they weren't going to build any permanent fortifications; they were stupid and ineffective against armor anyway. They had their shelter system and the interconnecting tunnels and could disappear in the face of an assault, if it ever came to that. He did, however, extend the minefield slightly, adding the anti-tank mines that those Army Sergeants had sold them.

According to CNN, most of the American fleet was at sea, but the threat level was still Yellow and as far as CNN knew, the military/NATO was still at DEFCON 4. When the spring of 2022 rolled around, the people at LTA went ahead with their regular summer-time activities. They planted the crops and extra alfalfa and delivered the cattle to the meat packer. A few more men volunteered for the 7th Mounted Cavalry Troop and they spent more time with their training. The cousin couldn't get the extra draft horses they needed, but he did come up with some mules. And, Clarence didn't fish much that summer. He was far more interested in watching the Cavalry practice when they had time. There weren't any scabbards for the LAW's rockets either; the men just tied them on their saddles in place of bedrolls.

The 7th Mounted Cavalry wasn't much like the 7th Cavalry of the Little Bighorn days. Custer had shunned the Gatling guns, but these boys had 2 kinds of Gatling guns, the 7.62mm and the 40mm variety. And, they didn't have to go crap in the woods anymore; one wagon sported 4 portable johns. They weren't eating beans either. The Sergeants hadn't supplied any MRE's but Derek had gone straight to the Wornick Company and purchased directly. And, the 3 cooks mostly had propane-powered ovens to heat the meals. Maybe cook wasn't a proper description for those guys; maybe heater's was more appropriate. Nah, they were cooks, they still had to bake bread. You could up the wagon count too; they now used mules to pull a 1,000-gallon propane tank for the ovens. It was a fine fighting unit with 3 platoons dressed in Union Blue and one in Confederate Grey.

Why, one might wonder, would anyone want a mounted Cavalry in the year 2022? Well, horses could go places that Hummer's couldn't and there was a certain shock value in men on horses. Besides, there was the nostalgia factor and maybe Gary, Ron and Clarence had just seen one too many John Wayne movies growing up. Who is to say? The lake was deeper, but you really could only tell because of the water being above the stake they drove in at the water's edge the previous fall. And when they did go fishing, they occasionally caught some very large fish. The lake was, after all, private property and not many people were permitted to fish there. Was that propane mentioned earlier? Yep, they had to put in a propane supply tank or two for the gas grills and to refill the Cavalry's tanker.

While LTA was cutting back on its production, Ray Garst was now up to full production and he hired some of the otherwise idle farmers to work his fields. Between the two organizations, no one who wanted to work was without work, and everyone wanted to work. Garst was finally meeting the demand for seed, too. Had it not been for the climate, which now resembled southern Minnesota and the ominous talk on the media about the subtle preparations that the military seemed to be making in preparation for a possible war, one might have thought one were in the Midwest during the late 1950's. Unless one went to the community center where the kids hung during the evening hours and listened to whatever that stuff was they called music.

o

The big event of every summer was the 4th of July picnic. On this day, they celebrated the Independence of the nation and the independence that LTA represented. And, it was the one-day during each summer that the only work done was the cooking of food for the picnic. Three other days each year, Labor Day, Easter and Christmas were also days off, but Easter came early, before planting season and Christmas came late when most everyone was only doing winter chores. The 4th of July and Labor Day were the days when they took time to check on the crops and see how they were doing and when everyone kicked back and just had a good time.

In the latter part of the 20th century, Independence Day has perhaps lost some of its luster in some parts of the country. Usually, the closer the country was to a past or looming war, the stronger the patriotic fervor. July 4, 2022, was filled with patriotic fervor, perhaps because everyone sensed that there was a looming war just over the horizon. But, would that war come from the east, i.e. Russia, or from the west, i.e. China? No one outside of military circles knew the answer to that question and the military wasn't talking and neither was the new Democrat President.

As a whole the NATO countries, Britain, Canada, the US and Mexico, had adjusted to the abrupt climate change. The weather had evened out in the sense that it was now fairly consistent. The spring, summer and fall made up 5 months of the year and the winter occupied the other 7. The winters weren't quite so harsh now, although the snowfall in the southern climes had to be seen to be believed. Up north, they got some snow, but there was still a persistent lack of water. Further north was a different matter entirely. The snow covered seemed to last throughout the year and was slowly migrating to the south. Was this a foreshadowing of another ice age? For certain, our three friends would never live to find out. The youngest of them, Gary, had turned 79 in March. Significant advances in the medical arts and a new generation of medicinals had added years to Ron and Clarence's lives. Diabetes was now the great killer, but insulin pumps were now pretty commonplace and there was even hope that the stem cell research being conducted would eliminate the need for those in the foreseeable future.

Russians had adapted to the climate change, too. They'd moved to Africa for the most part. A portion of the country's population remained up north, but with the change in climate many of those natural resources that they had strived to protect were now becom-

ing inaccessible and it was becoming less necessary each succeeding year to provide for their protection. There weren't enough Europeans to concern the Russians anymore and if the Chinese wanted those resources, they could fight the snow and ice and storms and were welcome to them. Yes, the Gulf Stream had started to move again, but the movement was so imperceptibly small that for all practical purposes it didn't matter. Germany looked more like Greenland than Greenland, although Greenland was rapidly beginning to rebuild its snowcap.

"Clarence, are you happy with how the Cavalry unit is coming along or do we need to make more changes to please you?" Derek asked.

"It's looking pretty good Derek," Clarence admitted. "Better than I expected in fact. That idea of keeping a 5-round magazine in the rifles while they're in the scabbards worked out ok, but I still can't get used to the idea of Cavalry carrying suppressed weapons."

"We had to reorder the scabbards to accommodate the extra length of the rifles," Derek observed, "And we had to settle for nylon holsters to accommodate the suppressed .45's but some things are a lot better now. Balloon tires on the wagons makes the pulling a lot easier for the horses and mules and the only weapons we have that make any noise is our modern version of the artillery."

"That artillery as you call it has pretty limited range," Clarence replied.

"It's close to a mile Clarence," Derek disputed, "And we've adjusted our tactics from the late 19th century to the 21st century. We'll be all right."

"It would suit me just fine if we never have to find out if our tactics are better than Custer's," Clarence allowed. "But it does sound as if the nation is slowly moving to a war footing."

"I'm sure of it Clarence," Derek responded, "I had to practically beg Wornick Company to supply us with those meals. And since they have such a limited shelf life, I had to sign a long-term contract with them. I just hope that they'll be able to deliver when the chips are down."

"Has anyone considered freezing those meals Derek?" Ron asked. "That might increase the shelf life considerably."

"I'll run some tests on a portion of the rations," Derek said. "They brought those out back when I was in the Army you know. I only got the Heat & Serve varieties to avoid the storage problem with those A-type rations that include perishables."

"Jack, did you have any trouble getting the extra suppressors for the new weapons?" Derek changed the subject.

"Nope, the minute I said LTA, all they wanted to know was how many," Jack chuckled.

“I’ve completed my training in use of explosives Derek,” Steve commented. “And those supply Sergeants included enough practice ammo in that shipment we bought that everyone in the Troops is cross-trained to operate the Miniguns and the Mk-19’s.”

“Are we all pretty much agreed that we’ll only employ hit and run tactics?” Derek asked.

“Yes,” Steve replied, “That’s the only thing that makes any sense.”

“I still have trouble believing that anyone would be foolish enough to start a war,” Gary remarked. “We have the longest summer season except for the Pacific coast and we only have a 5-month season. I know the Chinese and Koreans fought in the winter 70 years ago, but with the amount of snow we get in the winter, it would be worse than when Napoleon invaded Russia.”

“I don’t expect we’re going to see a lot of nukes in this war,” Derek suggested. “The attacking force might try to take out some key installations with nuclear cruise missiles, but I imagine that they will pretty much limit the nuclear engagement. Hell NATO can wipe any country off the face of the planet now that they’ve un-retired those nuclear weapons.”

“I’ll tell you one thing,” Steve added. “If someone does attack this country, you can look for it to come in very early spring. That way they’ll have a minimum of 5 months of good weather to carry out their attack.”

“I’m glad that we loaded up on extra livestock feed and fuel,” Derek responded. “We can skip planting altogether if that happens and put everyone on defense. Our fuel supplies will last for years if we don’t have to run the generators very much and we have a 3-year stock of feed for the livestock.”

“How about the other supplies?” Ron asked.

“Ten years, just like you guys have always insisted on Ron,” Derek answered. “And it never, ever falls below 9½-years with the automatic reorder points. Of course, our canned goods have a maximum 3-year shelf life, but we can probably still garden, even if there is a war. And before I forget, you’re going to see some equipment deliveries next week. I picked up a commercial cream separator, a dehydrator to produce powdered milk and an instantizing machine to produce instant milk.”

All About the Weather – Chapter 29 – War Warnings

Never mind the website Derek found was in Australia, it gave people an idea about the kinds of equipment they needed to do commercial food processing. Most people didn't have any idea what was involved with commercial production of food products. Take Quaker Puffed Wheat and Quaker Puffed Rice. Remember the commercials that said the cereal was shot from guns? It actually was, you know. Shot from guns, that is. The grains were pressurized in a steam atmosphere and released into the normal atmosphere causing the encapsulated steam to puff the kernels of wheat and rice. The thing that Gary had always like about visiting Cedar Rapids, Iowa was walking past the Quaker plant where they made puffed wheat and rice and Life cereal. The aroma was positively fantastic and it probably explained all of the restaurants in the area.

DHS raised the threat level to Orange and the military went to DEFCON 3 during late August while they were harvesting the crops. LTA hadn't implemented an alert system of their own, assuming that they would have a reasonable amount of time to react to any attack on NATO. CNN did carry a story about another ASW contact, again by a P-8 aircraft. This time, the plane maintained contact with the sub and a Los Angeles 688I class submarine got within attack range of the unidentified submarine. While CNN didn't know any more than that, military officials were being especially tight lipped on this occasion, CNN speculated that the US sub had either driven off the other sub or possibly even had sunk it. CNN was right on the last count. The sonar aboard the 688I class sub identified the unknown as a Chinese submarine. Since the contact was within the 12-mile limit, the skipper of the US sub launched a pair of MK-48 ADCAP torpedoes and sent the intruder to the bottom. The skipper of the Chinese sub snapshot 2 torpedoes, but the AN/WLY-1 decoys attracted them and the 688I class sub escaped unharmed. But only the military knew what had happened and they were not talking.

In all likelihood, had the SSN 761, Springfield, not approached the Chinese submarine from deeper water, the Springfield might not have escaped those Chinese torpedoes. A submarine needs a little room to maneuver and that encounter was too close for comfort. Normally, the US didn't home port subs in the Puget Sound, but the facility at Bangor was now home to half of the new Virginia class submarines. A few 688I class submarines were home ported in Bremerton. The other half of the Virginia class subs were home ported at Norfolk. All of the planned Virginia class submarines had been built and commissioned by 2022. And, all planned retrofits and upgrades planned for the fleet and the armed forces equipment had been carried out despite the state of the economy. The US, and by extension NATO, was ready for a war. Munitions and supplies had been stocked and every boat and ship was ready to sail and aircraft was ready to fly. A tremendous effort had been made to adequately supply every facility with the spare parts the soldiers, sailors, marines and airmen needed to have all of their equipment ready to use. The armed forces of the United States of America were at full strength, and everything worked, for a change.

In the event of a national emergency, a series of seven different alert Conditions (LERTCONs) can be called. The 7 LERTCONs are broken down into 5 Defense Condi-

tions (DEFCONs) and 2 Emergency Conditions (EMERGCONs).

Defense readiness conditions (DEFCONs) describe progressive alert postures primarily for use between the Joint Chiefs of Staff and the commanders of unified commands. DEFCONs are graduated to match situations of varying military severity, and are numbered 5,4,3,2, and 1 as appropriate. DEFCONs are phased increases in combat readiness. In general terms, these are descriptions of DEFCONs:

DEFCON 5 Normal peacetime readiness

DEFCON 4 Normal, increased intelligence and strengthened security measures

DEFCON 3 Increase in force readiness above normal readiness

DEFCON 2 Further Increase in force readiness, but less than maximum readiness

DEFCON 1 Maximum force readiness.

EMERGCONs are national level reactions in response to ICBM (missiles in the air) attacks. By definition, other forces go to DEFCON 1 during an EMERGCON.

DEFENSE EMERGENCY: Major attack upon US forces overseas, or allied forces in any area, and is confirmed either by the commander of a unified or specified command or higher authority or an overt attack of any type is made upon the United States and is confirmed by the commander of a unified or specified command or higher authority.

AIR DEFENSE EMERGENCY: Air defense emergency is an emergency condition, declared by the Commander in Chief, North American Aerospace Defense Command. It indicates that attack upon the continental United States, Canada, or US installations in Greenland by hostile aircraft or missiles is considered probable, is imminent, or is taking place.

Derek sure liked the new seed Garst had developed. It pretty much yielded 42 bushels to the acre year after year given a minimal amount of sunlight and adequate moisture. The harvest this fall came in as expected. They set about processing the soybeans and filling bunker #1 and processing the meal. However, they had no intention of selling the TVP this year. They bagged it and stored it against a 'rainy' day. They also slowly cut off their milk customers, and began turning all of their milk production into cheese and instant powdered milk. (And a little ice cream, naturally.) When it began to snow, the snow fell steadily, but not so fast that they couldn't bundle up and get in a little extra time on the firing range. Even the three old geezers took their turns, but they limited themselves to shooting at the 100-yard targets. None of the three were any Annie Oakley, but they put all of their shots in the black of the man-sized silhouettes. They did pretty good shooting from those golf carts.

Given the news about the climate and the increasing news about the military situation, everyone was subdued as the winter wore on. Eventually the snowfall was too deep to go to the range anymore and instead, everyone took the time to make certain the shelters were all properly stocked. They were about 600 miles from the nearest coast, so the odds were they'd have ample warning of any pending peril. Between the two opera-

tions, they had 146 square miles and while that sounded like a lot, it was only an area about 12 miles square, plus 2 odd sections, one of which was the lake. It was a shame they didn't have a chopper or something to patrol the two ranches. But they didn't and no one flew a helicopter. Three of those farm boys had private pilot licenses, but that would mean an airstrip and that would be too much work to keep clear during the winter months.

After Thanksgiving dinner, Derek was visiting with Steve about the issue of a helicopter. Steven mentioned that the deputy who flew the Sheriff's department helicopter had retired the year before. The man, according to Steve, lived in Holbrook and the department's chopper was a Bell 206L-4 Jet Ranger, also called the LongRanger IV. Steve thought Derek ought to talk to the man and see if he would pilot a chopper for them. The man, according to Steve, was also a qualified UH1 pilot from his military days. Derek suggested that Steve and he make the trip to Holbrook the following day to talk to the man.

Friday, November 25, 2022...

The retired Deputy, Don Adams, was glad to see Steve and more than willing to talk to them about helicopters. Don freely admitted that he missed flying, but there weren't many helicopter pilot jobs available in the area. Derek asked him what he recommended and Don really liked the LongRanger IV. A good used one could be had for maybe \$1.25 million. Which naturally led Derek ask if Don knew where a good used one could be had at any price, and if LTA bought a helicopter would Don fly it for them. There was one available in Flagstaff and Don would love to fly it for the corporation, he said. Corporate employees got free housing and free medical coverage, Derek pointed out and if Don wanted the job, he could have it, but Don and his wife would have to move to the ranch. Don checked with Helen and she said sure and they had a deal. Then Don picked up the phone and called Flagstaff just to make sure the helicopter was still available. It was and Derek talked to the owner and made an appointment for the three of them to look the bird over at noon the next day. If it all checked out, Derek said, he was prepared to write a check on the spot.

Noon, Saturday, Flagstaff...

The LongRanger IV had about 30 hours on it since a major overhaul. During that overhaul, all of the avionics had been upgraded and the airframe recertified by an FAA inspector. The owner said it would burn Jet Fuel A or Jet Fuel B or if they could get it, JP-5 was even a better deal because it was stabilized. The chopper had a 91-gallon fuel tank and a range of about 324 nautical miles. It flew in cruise mode at 70% power at 112 knots. Before they left LTA that morning to pick up Don in Holbrook, they left instructions that a helipad be cleared. When the subject of fuel came up, Don suggested the Army standard 10,000-gallon collapsible tank. The tank measured 22 by 22 feet when empty and 20½ by 20½ by 4 feet when filled to capacity. Hose and fitting kits could be used to connect any combination of collapsible tanks. Other collapsible tanks were available in capacities of 3,000 and 50,000 gallons. Since it was only a temporary

solution to a long-term problem Derek told Don just to locate a 10,000-gallon tank and he take care of the permanent installation.

It looked like they would have a construction project in 2023 after all. Derek figured they'd burn an average of 32-gallons per hour of airtime. The was about 150 days at 14 hours a day plus 215 days at 8 hours a day, not allowing for any days off. $(150 \times 14) + (215 \times 8) = 3,820$ hours maximum flight time and at 32gph, they'd need 122,240-gallons of fuel per year. Since they could theoretically be forced into some nighttime ops, Derek decided that he wanted ½ million-gallons of jet fuel. And to ensure a long storage time, that he'd better go with the JP-5. But, when he called fuel suppliers they said that at the moment, the military was taking all of the JP-5 they could supply. Derek ordered 10,000 gallons of Jet Fuel-A to fill the temporary tank and called Fisher Tank about a JP-5 tank. Fisher told him that it would have to be a hurry-up job, they were heavily committed for the summer with military contracts, but if they could come in April, they get the tank in by the end of the month. Good customers got a little preference, you see.

Derek called Gallup for one more trailer and they had it in stock and ready for immediate delivery. Well there was too much snow and frozen ground to put in a basement, but he would have a spot cleared to store the trailer and told the dealer to bring it. Derek also warned Jim that he was going to need a hurry-up basement put in during April. Finally he called the curb and gutter contractor and order a helipad constructed in April. From that day on, Don flew 5 days a week. Between the aerial photographs and the topo maps on the map computer, by the first of April, they had a fully updated set of maps.

Washington...

"Mr. President, there is no sign of a ship buildup anywhere along the Chinese coast," the Chairman of the Joint Chiefs advised. "However, there is a lot of activity at Cam Rahn Bay."

"General, the Chinese have held Vietnam for several years now, so that activity is no doubt a Chinese buildup," the President speculated. "I want you to shift some satellite assets to give that area more coverage. I'll nuke that facility if I have to."

"Yes Mr. President," the Chairman replied. "I give you another briefing after we shifted the Keyholes and had completed the photo interpretation."

That was an interesting conversation, but it didn't reflect Oriental thinking. The Oriental way of thinking about a problem like this was to keep the activity level moderate and slowly transfer the men and material somewhere else. Some place, for example that the US/NATO would not be looking with their satellites. And if the Americans/NATO happened to see the moderate increase in activity at Cam Rahn Bay and switched their satellites to cover that area, so much the better. They couldn't actually observe the loading operations without HumInt and they had no assets in Vietnam. The buildup had

started the year before and so far had apparently gone unnoticed. No, if the Americans really wanted to observe the buildup, they should be watching the disputed territories-islands in the South China Sea.

March 20, 2023...

Derek had everyone available out clearing snow and thawing ground. He wanted to be ready for the tank people and he wanted to get Don's home in. Don and Helen had sold their home and had to be out by April 15th. With a single basement to install, Jim and company were forced to use a backhoe, so they were going to be cutting it close. The people from Fisher showed up, bundled up for the lingering cold and proceeded to erect that JP-5 tank working 24/7. Derek knew he was going to need to fill the tank immediately after it was completed and he tried the fuel supplier again. As luck would have it, the military was temporarily full up on JP-5. They were waiting for a Pennsylvania company to erect more fuel bunkers. (Gee, I wonder who?) If Derek could take delivery in early May, they would supply him with the ½-million gallons of JP-5 assuming he could pay for it. Derek asked them how much it would be; he'd send a check over on the corporate chopper immediately, or, if they preferred he'd just pay cash. (Has Derek spent too much time with Ron?) The man at the petroleum company must have thought Derek was kidding. He said, "Cash is good." Derek's only response was, "Will that be \$20's, \$50's or \$100's?"

Fisher finished up a day early and took their check and left. The next day the fuel trucks started pulling in with the JP-5. It was only 28 tankers and the delivery was accomplished in a single day. Derek gave the driver with the last load the LTA's check paying for the delivery in full. Although the chopper had just had a major, it needed routine maintenance and Derek told Jim to go ahead and put in 4 basements in addition to Don's. They were obviously going to hire a ground crew to service the chopper. It was wasting too much off Don's time having him do even the routine maintenance.

Washington...

"Mr. President, our satellite photos don't really disclose anything too out of the ordinary in Vietnam," the Chairman reported. "There seem to be some troop exercises in the area, but other than those vehicle movements, we can't see any buildup."

"General, ½ of Vietnam moved to the US in the 1970's, surely the Agency has some Vietnamese on its payroll," the President replied.

"I'm sure they do Mr. President, but you'd have to take that up with the Intelligence Czar," the General explained.

"Doesn't the DIA have any assets in Vietnam?" the President asked.

"We did, until the Congress reconstructed the intelligence community back in 2005, Mr. President," the General replied. "But now, the CIA runs roughshod over everyone and

we aren't allowed to have our own HumInt assets.”

“I’ll see if Czar Reed will take my call,” the President responded sarcastically.

All About the Weather – Chapter 30 – The CIA

Washington...

“You tell that arrogant SOB that I want him in my office in 2 hours or his resignation on my desk before the end of the day,” the President shouted and slammed down the phone.

That afternoon, CNN reported that according to good sources Intelligence Czar Reed was thinking about submitting his resignation. Czar Reed reportedly had about all of the heavy handedness that he was going to take from this President. Interviews of several Representatives and Senators on the Hill said that it was a disgrace the way the President was pushing around Director Reed. Director Reed had been a fine Representative and Senator from the Commonwealth of Massachusetts and they simply could not understand why the President was acting this way. One Senator suggested that he was going to call for a Committee investigation of these events and that when the President was shown to be wrong; he was going to personally recommend that the House begin impeachment proceedings.

The President saw the news coverage and said to hell with it. He went to his quarters in the White House and proceeded to get royally drunk. If that Czar Reed thought he was in charge of this country, the President told one Secret Service agent, he was very mistaken. “Yeah,” the agent thought, “that’s what you say every time the SOB gets one up on you and you get drunk.”

LTA...

“Don, do you know where we can get a good ground crew for that bird of yours?” Derek asked.

“Nah, boss,” Don replied, “But I’ll check around. Maybe the guys who used to service this bird over in Flagstaff will be available.”

“I told Jim to put in 4 more basements,” Derek said, “Which reminds me, I forgot to order more doublewides. Did you get checked out on your weapons?”

“Yeah, I did boss,” Don replied, “But I’d rather have my .357 than a .45 auto and a M16.”

“Well Don, we have some .357 ammo for the old geezers Ruger’s, so you might as well carry what you’re comfortable with,” Derek replied.

“What is it with those guys?” Don asked, “During the summertime, they just seem to run around in those golf carts wearing the Rugers and carrying those Winchesters in a scabbard.”

“They all have 7.62 rifles, but they can’t really pick them up anymore,” Derek laughed.

“You’ll have to blame the Rugers and the Winchesters on my Dad. He bought a cowboy hat in Tombstone one year and he’s been half acting like a cowboy every since. I remember hearing a story about back in 2004 when he misplaced his straw hat. He was depressed for weeks until Amy’s daughter found it behind a stack of videos.”

“Is that that grimy old black hat he wears all of the time?” Don asked.

“The hat isn’t black Don,” Derek chuckled, “That’s just 26 years worth of hair grease.”

o

Since no attack on the US came in April Derek went ahead and planted 20 sections of soybeans. Apparently Clarence was hung up on that LAW Rocket suggestion; each golf cart now sported a nylon case containing a LAW Rocket. What did Clarence think? That a largemouth bass or a walleye was going to jump out of the water and attack them? Derek supposed that he could forgive Clarence his obsession, but why were Ron and his Dad going along with it? Maybe it was just a case of monkey see, monkey do. Derek had ordered the trailers the same day he’d talked to Don about a ground crew and by the time Don rounded up 4 guys from Flagstaff, the homes were ready for occupancy. The new gal in charge of supply brought something to Derek’s attention; a lot of the automated orders to replenish the supplies were being backordered. Sometimes the delay was brief, but some items were getting hard to come by. The extra meals that they’d ordered from Wornick, for example, would be delayed for a minimum of 6 months. He told her to do the best she could, they wouldn’t starve to death anytime soon.

Except for those homes that were coming in any day, there weren’t any pending construction projects. And with only one section of corn to cultivate, most of the Cavalrymen had lots of time to practice their marksmanship and riding skills. This had turned out to be a pretty good militia outfit, Derek felt; and it was, to say the least, unique. The men had insisted on one or two changes to the uniform. For one thing, they weren’t Australians and wanted to switch to the Stetson hat. And, since they were Calvary and they might have to work in cold weather, they wanted the greatcoats with the yellow lined (cavalry) cape. The bottom line in all of this was that they wanted authentic uniforms from the latter half of the 19th century and the only thing they knew about the uniforms what was what they saw in the old western movies. Now Derek understood. They didn’t want authentic uniforms; they wanted to look like the Cavalrymen in “Fort Apache”, “She Wrote a Yellow Ribbon” and “Rio Grande”.

The Chinese had lost a Kilo class submarine. And while they were angry over the incident, they weren’t about to let the loss of one submarine force them into reacting and possibly disrupt their carefully devised plan. In the intervening years, the Chinese had acquired plans for the Russian nuclear submarines. The Russians built a strong submarine, but it was beset by reactor problems, among other things. The Chinese had started from scratch on the reactors and had eventually worked out the problems with the Russian-style reactors. The stolen data from Los Alamos Lab had proven to be most useful. With all of the problems caused by the climate change the Chinese had sacrificed a

lot to get those 12 nuclear powered, cruise missile equipped submarines. Thus they didn't plan on sending them to North America until they were ready to set their plan into motion.

The Chinese satellites revealed that NATO was preparing for a war, possibly with them. But America had reacted too quickly and America would pay, internally, for that error. The longer the NATO countries remained of a heightened state of readiness, the less effective they became. When the spring of 2023 rolled around, the Americans, Canadians and Mexicans were poised to defend their continent. But the Chinese weren't ready to strike and had they been, they might have deferred the attack anyway.

The Chinese, you see, knew about Pearl Harbor and the sloppiness that had made the attack work for the Japanese. This time, of course, they wouldn't be up against an enemy with a new fangled radar device that they could operate but no one really trusted enough to rely on. And, the Chinese computer industry had surged far ahead of the Americans' allowing them to create a totally secure communications system. Even if the Americans intercepted their communications, the massive computers used by the Americans would take years to decipher a single message.

For all of their secrecy, the Americans loved to talk about their past successes. History was the basis for a lot of military planning. The Americans bragged about their military successes and failures on TV! Was there anyone in the whole world who didn't know about the general thinking of the American military mind? Despite the events of 07Dec41, the Americans still based a significant portion of its naval fleet in the death-trap, Pearl Harbor. A couple of nuclear tipped cruise missiles would do a lot more damage than the Japanese ever thought of doing. And, a nuclear tipped torpedo didn't actually have to hit a carrier to put it out of action. Maybe pundits would assume that the Chinese hadn't progressed militarily in the almost 20 years since the climate change had thrust itself on the world, but they would be very, very wrong.

o

Citing intelligence failures as a primary cause of the disaster of 11Sep01, the Americans had reacted predictably and had ended up reorganizing their intelligence community. The solution to all of the turf wars among the myriad of US intelligence agencies had been to create, in 2005, an Intelligence Czar. And, for whatever reason, the Americans had chosen to create a cabinet level post for the DNI and put all of the intelligence apparatus under his control. "Capt. Bart Mancuso: Central Intelligence Agency... Now, there's a contradiction in terms." And there was the joke that claimed that US Military Intelligence was an oxymoron. And there was Czar Reed who not only believed that he was more powerful than the President of the US, but had demonstrated on more than one occasion that he was more politically astute. Thus when the US most desperately needed HumInt with respect to the activities of the Chinese, Reed had effectively precluded that very thing with a power play designed to put the President in his place.

LTA...

Derek actually found time to join The Three Amigos at the reservoir and get in a little fishing during the summer of 2023. Over the years, the three men had become somewhat eccentric, but in many regards, they were as sharp as ever. Listening to the men talk, Derek recognized that those 240 years of cumulative knowledge might serve LTA very well in the near-term. Ron and his Dad were movie buffs and had seen 80% of everything Hollywood had produced; going back to before they were born. And, they were history buffs, especially his Dad. The men maintained that should it ever come to a battle situation, the best approach was guerilla warfare carried out by a highly mobile force on the order of the 7th Mounted Cavalry. There was deceptiveness about The Three Amigos, too. They gave every appearance of being infirm, but the way they fought those large fish they occasionally hooked onto belied that impression.

The summer of 2023 passed quietly. The backorders began to be filled as the military finally was stocked to the hilt and JP-5 even became easy to acquire. Derek also cut back Jack's flights when the anticipated invasion didn't occur. The NATO, and US on the other hand, remained at DEFCON 3 and threat level Orange. The news carried by CNN concerning a brewing fight between the DNI and the President proved to be unfounded. The DNI retained his job and the President rarely spoke of the incident or of Czar Reed. When the US needed a President with a little backbone, they instead had a man with puffy cheeks and bloodshot eyes, à la the late Teddy Kennedy.

Too many days at DEFCON 3 had stolen the military's edge. Finally, the Joint Chief's persuaded the National Command Authority to reduce the level to DEFCON 4 and the threat level to Yellow. DHS was another of those pitiful results of 11Sep01. Combining dozens of agencies or parts of agencies under a single umbrella, Congress and the President at the time, Bush Jr., had streamlined the US into additional ineptitude. FEMA shined, usually, when it came to natural disasters, but only if they were sudden events. When the disaster drug out over a period of years, FEMA didn't respond as one might have hoped. The abrupt climate change was just one such example. It had occurred over a period of years and FEMA hadn't adequately responded.

With the fall harvest in, Derek reevaluated and sold off the TVP from the prior year's crop. His experiment with the Unitized Group Rations (UGRs) had proven successful so far, and he speculated that they could store the rations for years if necessary, despite the 18 month shelf life at 80°. He also stored the MRE's in cool dark storage, greatly extending the life of that product. All of the fuel tanks were topped off and nature seemed to be cooperating, as they moved into the winter of 2023-2024. The only time the generators were run were the exercise periods to ensure they would come online when needed.

South China Sea...

It was finally time to set the plan into motion. All of the troops and matériel had been relocated to the South China Sea and the Chinese had bought up every Cruise ship and passenger liner afloat. They had also copied the American Liberty ships from WW II and

could effectively deliver their military might to American shores. The first step in their plan was already in motion. An old tramp steamer filled with nearly 1,200 Chinese had sailed for the US. Aboard were the 1,200 tattered human beings and a medical staff. The medical staff would perform its final chore and be removed by submarine a few hundred miles off the American coast. That final medical task involved infecting those 1,200 wretched souls with a carefully engineered virus. The hope was that the Americans would take pity on the passengers and allow them to receive medical treatment before returning them to China. That would all it would take to start the spread of a pandemic among the Americans. The disease wasn't fatal, but it was very incapacitating. Only the very young and the very old were at risk of death. But, for a month long period, much of NATO would be so ill that they would be barely able to respond to an attack against the continent. Or, so went the theory.

Mid-March, 2024...

The 12 Chinese nuclear powered submarines carefully moved into position. One was set to launch an attack on the US military installation at Pearl Harbor using a pair of nuclear tipped cruise missiles. The other 11 were positioned off the American coast outside the normal search patterns of the naval patrol aircraft. The ship carrying the first wave had arrived in the US 3 weeks earlier, but there was no indication if the Americans had contracted the virus. At 0600 PST, the 12 submarines would launch their missiles. The sub standing off Pearl Harbor would only launch the 2 nukes, and then steam at flank speed to the US mainland. The other subs would launch their full complement of nuclear tipped missiles. Even if the Americans hadn't contracted the virus, this strike alone would seriously impinge on the ability of the NATO military forces to react.

The remainder of the Chinese fleet of several hundred large ships and several thousand smaller vessels was standing off the North American coast, again just outside the range of the patrol aircraft. The cruise missile attack, coming from so close in would make it most difficult for NATO to identify the source of the attack, e.g., the country responsible. Maybe the Americans would presume it was an attack from the Russian and launch an all out nuclear strike against the African Continent. Or, maybe that was too much to hope. The cruise missiles were, after all, of Russian design and impossible to differentiate from the real Russian missiles.

All About the Weather – Chapter 31 – Opening Shots

I suppose that most people believe that any attack against the US would include an attack on the NCA. After all, wouldn't the enemy have much to gain and little to lose by attempting to decapitate the US's government and thereby leaving the US military without its Commander in Chief? Well, maybe that makes sense, but the Chinese realized that the sitting American President was beset with personal problems. Besides, if they decapitated the American government, there wouldn't be all of those civilian employees making bad decisions and confusing the situation. Left to its own devices, the military would react promptly and decisively. They would just assume it was the Chinese or the Russians and probably nuke both. However, the civilian head of government would want to be at least a little certain whom he should attack before he let fly the American arsenal of nuclear weapons.

Not that it really mattered to the Chinese, because it didn't. They had a mixed Army of men and women numbering in the tens of millions and those that survived the assault on America would be the seed stock from which a new Chinese nation would arise, albeit half a world from China proper. Nuclear tipped cruise missiles and nuclear tipped torpedoes do not have especially large warheads. But the warheads were large enough to do some damage and a wounded person was more debilitating to an Army than a dead person. The NORAD headquarters at Cheyenne Mountain outside of Colorado Springs couldn't withstand an attack from a large nuclear weapon, but it was more than able to withstand the effects of the smaller cruise missile warhead. Thus it would be a waste for the Chinese to launch weapons against that facility.

The weapons that the Chinese had launched targeted concentrations of American military ships and forces in the western half of the country. However, much of America's Army was based in Texas and on the east coast and the only thing the attacks did was open the door for the Chinese and generally permit them to land their forces with moderate, but acceptable casualties. Of course, the US and NATO reacted predictably and began to move their forces to meet the Chinese invasion. However, some of those forces had to be moved 1,500-2,000 miles and others over 3,000 miles. April Fool's Day wasn't the holiday one would typically associate with an attack by an enemy. April 1, 2024 was a Monday and Americans on the east coast had arisen, and gone to work just like any other Monday morning. Americans on the west coast were just in the processes when the Chinese struck. The Chinese ships were spread out anywhere from 300 miles off the coast to 600 miles off the coast. They were, in fact, mostly a full day's steaming time away from the coast. All that is, but the cruise liners and the like that were capable of steaming much faster than 8 knots.

It was late afternoon before the first ships arrived. This wasn't the Normandy invasion and the Americans didn't suddenly wake up one morning and find a concentration of 5,000 vessels off a narrow stretch of its coast. Not hardly! America went immediately to DEFCON 1 and Threat Level Red, but aside from the missile attack there was no one to strike back at immediately. The US/NATO military began to deploy what remained of its west coast fleets and Soldiers began to load their equipment for shipment to the west

coast. The attacks on Hawaii, San Diego and Puget Sound had been resounding successes and much of the fleet that wasn't deployed lay in ruins or was heavily damaged. Camp Pendleton and other military installations on the west coast and in other places glowed in the radioactive wastes. America would be delayed in responding to the invasion. Those large concentrations of fighters and bombers were also seriously affected and the Air Force wasn't able to mount much resistance initially. Advantage: China.

LTA...

The loudspeaker blasted out "Boots and Saddles." Boots and Saddles is a bugle call alerting troops to ready themselves for a riding campaign. However, in the case of LTA, it was basically a warning that the ranch was moving from its normal peacetime status to a war footing. People presented themselves at the armory and drew their weapons and munitions. The Cavalry wagons were loaded with supplies and ammunition and the weapons made ready in every respect. However, the enemy was still off the coast when the bugle call went out and all the folks at LTA could do was hunker down and watch the unfolding events on satellite TV. The low altitude nuclear bursts hadn't had much of an EMP effect and communications were still up.

But the news networks were slow to respond and the initial information they had was mainly speculation. They dutifully reported the hike in the Defense Condition and the new Threat Level. But it took them most of the day to begin to report anything meaningful. Derek and Steve realized that the Bugle call was perhaps a bit premature, but it did have the desired effect of putting everyone on notice of the invasion. A quick check of the supplies inventory showed LTA to be as fully prepared as the military and perhaps then some. They had only recently been resupplied with munitions and the ranch was good to go for a full 3 years. Derek didn't even send Don aloft in the chopper, what was the point?

It took the Chinese the better part of a week to land all of their vessels, but 98% of them made it to shore and disgorged their cargos. They could not have struck at a more opportune moment. Even in carefully planned military operations, there was always an element of luck. And as luck would have it less than 35% of the American Naval forces were at sea when they hit. The Americans did their level best to strike at the invaders with their carrier based aircraft and submarines, but it was essentially too little too late. The Americans did manage to destroy a lot of the shipping, but only after the ships had unloaded. The Americans had trapped the Chinese on the North American Continent, but then the Chinese planned to stay on the North American Continent anyway so they really didn't mourn the loss of the ships.

The Chinese sub that had struck Pearl had steamed towards the US and had pulled up short, but within missile range. Then, the sub began to station keep. The other 11 Chinese subs sailed at flank speed out of the American sphere of influence to a supply ship and began to take on the Harpoon like missiles that could be launched from a sub against a ship. Their latest generation torpedo, completely computer designed, was every bit as effective as the Americans Mark-48 ADCAP. And although the Americans

could field a slightly greater number of subs, the Chinese subs were every bit the equal in most regards to the Virginia and Seawolf class subs.

Americans had long been fascinated with the possibility of a nuclear war and Hollywood had generated a lot of films on the subject: *On the Beach* (1959), *Dr. Strangelove* (1964), *Fail Safe* (1964), *Twilight's Last Gleaming* (1977), *The Day After* (1983), *Testament* (1983), *Threads* (1984) and *By Dawn's Early Light* (1990). Films of a more recent vintage seemed to focus on the monster such an event would create. Most of those movies were from the 'Cold War' era and focused on a conflict between the United States and the Soviet Union. Even *Red Dawn* (1984) involved the Russians and the Cubans. But for all of its efforts Hollywood had never portrayed the real horror of the events that were now transpiring.

Gary, Ron and Clarence rarely left the TV long enough to piddle, so focused were they on the events that were unfolding. To the extent that the US was able to mount an air defense of the homeland, they had to deal with a vast armada of SAMs. At the end of 1998 the improved "Qianwei (Advance Guard)-2" was introduced. According to the developers of this new missile, the "Qianwei-2" (QW-2) is the world's most effective one-man shoulder-launched ultra-low-altitude air defense missile, surpassing the US "Stinger" and the French "Mistral" in performance. "Missiles, China Has Them too! Introduction of Finest PLA Missile Series" Hong Kong Wen Wei Po 1 Jun 99. But, that couldn't be true; the US was the most powerful military power on the face of the Earth! Just ask the Americans if you don't believe me.

The housing compound was on the northern border of the ranch. Persons passing by the ranch on I-40 generally didn't even know the ranch was there. The use of trash farming only partly disclosed the location of the ranch and this past summer Derek had planted the clover in 21 sections, allowing the area nearer the highway to lie fallow. Thus, there was a chance, be it ever so small, that LTA might escape unnoticed. But, was that a risk that they could afford to take? The NATO military forces moved over the course of many days to the eastern California border. The Chinese, over the same time period moved well past the coast and were nearly 200 miles inland. The Chinese had brought all of the supplies they needed for an extended campaign, but so swift and successful was their initial assault that they captured the west coast refineries and their fuel stores. And, the pathetic resistance put up by the patriot militias was an all out effort but succumbed to the sheer volume of the attacking force. The Chinese had landed all the way from San Diego in the south to Seattle in the north. And once assembled their forces began a surge across America.

The NATO forces found themselves outnumbered and were forced to withdraw strategically, following a scorched earth policy so as to deny the Chinese stores. And, the Chinese advance though sustained, was plodding because of the sheer volume of men and matériel they had to move. The Air Force did its very best, dodging the Chinese missiles, and some planes got through, hurting the Chinese, but not stopping them.

Mt. Weather...

"I absolutely refuse to use nuclear weapons, tactical or otherwise on American soil," the President responded to the Chairman. "Your troops are just going to have to do better General. By the way, what did they do with Reed's body?"

"It will never show up Mr. President," the General replied, "But Congress is already calling for an investigation."

"Of whom, him or me?" the President asked.

"Yes," the General replied.

"Well screw them for now," the President said, "I'm not going to worry about the Congress when I have to fight 20 million Chinese."

"As I told you Mr. President, it appears to be closer to 35 million," the General replied. "And if you don't release those tactical nukes, we won't be able to stop them until they're halfway across the country."

"Don't we have those fuel air bombs and the big conventional bombs?" the President asked. "I seem to recall being briefed on something called the Mother of All Bombs."

"We don't have many Mr. President," the Chairman explained, "And, they're dropped by a C-130 or C-17. It will pretty much be a one-way trip for those aircrews because of the Chinese SAM's."

"Fine, I'll give them all posthumous medals," the President replied. "Make it happen General."

"Ah, yes sir," the General shook his head and left.

The MOAB that turned out to be a highly overrated weapon, and the Air Force didn't actually have many in inventory. But the General had his orders and he would continue to carry them out as long as he could. But if those Chinese made it to New Mexico and Colorado, the General intended to get some of his specialists to circumvent the PAL's and he was going to use the small nukes with or without the President's permission. At least, locked up in Mt. Weather, the President hadn't been able to get his hands on any booze. But the booze had already taken its toll on the guy's thinking processes and he wasn't making rational decisions. The US did in fact have nuclear cruise missile warheads, the W84. They had been stored pursuant to a treaty. Its carrier, the ground-launched cruise missile, was eliminated by the Intermediate-Range Nuclear Forces Treaty of 1988. Interesting enough, the missiles were still around, albeit without the nuclear warheads. Most people think of the TLAM-N, and wonder how many we actually have. It uses the W80 warhead with a yield range of 5 to 150kT. A total of 1750 Mod 1 and 367 Mod 0 devices were delivered to the military.

The conflict ground to a temporary halt in western Arizona and west central Utah. The three old geezers took the opportunity of the lull in fighting to discuss how America could have had 2 Pearl Harbor disasters. They were just speculating, mind you, but the consensus was that the US had remained at DEFCON 3 for too long and numerous false alarms probably led to a situation where someone aboard a Cruiser or Destroyer mistook an Aegis warning for another false alarm. They were about ½ right; the Chinese had been counting on that very thing. But there was more to it than that. The Chinese sub was close aboard and the missiles' flight times were so short that even the most sophisticated system probably wouldn't have saved the fleet. The Americans were so in love with their hardware. But, it wasn't foolproof, or the USS Vincennes wouldn't have shot down Iran Air Flight 655 on July 3, 1988. One little mistake! Did the petty officer aboard the Chosin CG 65, flinch because of the Vincennes incident? We might never know because that petty officer was dead.

The pause, or lull, lasted for about 3 days and the Americans kept pounding the Chinese, eventually resorting to UMV's because of the high loss of American pilots. Meanwhile a specialist was able to disable the PAL in one of the W84 warheads and a whole group of specialists set about doing the same modification to all of the warheads. And, the General moved up a load of Tomahawks, borrowed from the Navy and they began to fit the warheads. With the action so close to LTA, Derek moved the women and children into the shelters. The 7th Mounted Cavalry with all of its modern Gatling guns and 19th, 20th and 21st century equipment headed for the hills to scout the territory. The Chinese were still a long way off, over 60 miles away, so the Troop had lots of time to plan its moves. They sent the scouts to the west equipped with radios and hunkered down to wait for the Chinese to pass them by so they could strike from the rear.

For all intents and purposes, LTA looked like a ranch that had been hastily deserted by the residents fleeing from an encroaching enemy. This was far from the truth. Those men who were not members of the Cavalry assumed the chores of tending to the live stock, e.g., feeding the cattle, hogs and poultry and milking the cows. The ranch was also on stage 3 with the thermostats turned down and the water heaters off. They locked down the wind turbines and fired up a generator or two just to provide them with electricity and keep the batteries topped off. When the message came in from the Troop, even the generators would be shut down and they'd operate on battery power, trying to maintain the illusion of an abandoned ranch.

Don could have flown his chopper of course, but with all of the military flights in the area, they had to change their plans and ground the chopper. It certainly wouldn't do to have some Sierra Hotel Air Force pilot mistake Don for the enemy and shoot him down. Derek was with the 7th and Steve was in temporary command of the ranch. The three old geezers sat in front of a large screen TV and watched a satellite feed from an embedded news crew's camera. Their Vaqueros strapped on and their Winchesters across their laps. They were shouting for the 'good guys' and booing the Chinese. And of course, offering commentary to anyone within earshot.

With the W84's installed on the Tomahawks, the General ordered them to the front and warned the NATO troops under cover. He was tired of this and enough lives had been lost. Frankly he didn't care if they decided to Court Martial him, he was going to stop the Chinese right in their tracks.

All About the Weather – Chapter 32 – Cruise Missile Attack

Being ½ right is akin to being a little bit pregnant or a little dead. All along the front, from Montana and Idaho to Utah and Arizona, the cruise missiles were set up with their warheads and at the 'appropriate moment' launched. A whole lot of Chinese died as a result of that series of missile attacks. Not all of them by any means, but a whole lot of them. The General had one thing right; he did get an Article 32 hearing and a General Courts Martial. His fellow Generals who sat in judgment convicted the General of violating Articles 88, 92, 108, 118, and 133. His appeal was denied and he was taken out and shot. His fellow Generals confided to him that he had some big ones and they all claimed that they would have done the same thing given the opportunity. Yeah, right!

The missile attack did halt the Chinese. Temporarily. But they only lost a portion of their forces, less than 50% and they moved away from the attack sites, regrouped and resumed their movement to the east. The 7th Mounted Cavalry saw the missiles being moved in position right in front of them. Derek did not have a good feeling about those missiles, they were Navy birds and they didn't have a warhead like any he'd seen before. As a consequence, when the Army fired the missiles, they all sought cover. Exploding as they did many miles away, the missiles' blast effects were minimal, and they were spared the flash of lights as the warheads exploded. Nuclear missiles meant fallout, however and the 7th returned to the ranch as fast as they could push the horses and mules. They sheltered the livestock and headed for the bomb shelters. Surprisingly, there was less fallout than they expected and they didn't need to stay in the shelters the full 343 hours.

When the Chinese reformed, they moved to the north and south of I-40 and they somehow managed to bypass LTA. The men wore protective garments and tended to the livestock. However, there was so little elevation in the radiation that they need not have bothered. Advantage: NATO

The enemy had lost perhaps 15% of their forces before the cruise missile attack, and was down from 35 million to about 30 million. Allowing for those who died in the attack by the Army and subsequent radiation sickness, one could safely cut the 30 million to 12 million, give or take. And, they were spread out from Montana to Arizona. But hell, 12 million was a whole lot of troops, and the new Chairman of the Joint Chief's didn't have such big ones. There would be no further nuclear weapons used by the Americans against the Chinese forces. On the other hand, that didn't mean that there would be no nuclear weapons used against China itself. Since the General's attack hadn't stopped the Chinese, the President saw fit to utilize the missiles in the silos before the Chinese overran the sites. Nothing was going to grow in China for centuries to come.

The Russians watched the American tragedy with interest. When finally the President did launch an all out attack against China, the Russians were most appreciative. Now, their far eastern resources were safe from further exploitation by the Chinese. America had given Russia a gift of immeasurable value. Europe was unable to attack due to the debilitating effect of the climate changes and now China was out of the picture as a

country.

The Americans called a halt to their efforts on the 4th of July, although it remained to be seen if this would be the last time they celebrated the Independence Day holiday. Summer was half gone and the Chinese had only advanced about 600 miles inland. At this rate, they'd be lucky to make it to the Mississippi before winter set in. In the north there wasn't much moisture, but the frigid arctic winds drove the wind chill factor to 3 digits below zero. Further to the south, the Chinese would have to contend with 18' of snow. The new Chairman of the Joint Chiefs was a student of history and he directed the NATO forces to wage guerilla warfare commencing immediately. The Army received some unanticipated help, too, in the form of the 7th Mounted Cavalry.

Derek and Steve pretty much figured that the Americans would resort to guerilla warfare; it was the only thing that made sense. This time out, Steve was joining the troop. The 7th mounted up and headed towards the east, as much to cut off any Chinese retreat back into LTA as to cause damage to the enemy. And the 7th had a distinct advantage, they had some free time and Don had taken more photos. Consequently, the maps had all been updated all the way to Grants, NM. The area along I-40 in that area is some seriously mountainous terrain. This gave a decided advantage to the 7th and they milked it for all it was worth. The tail end of military formations was support and supply. And, with a range of 1,400 meters, the Mk-19 was the perfect weapon to snipe the Chinese rear end. To the extent that the Chinese put out a rear guard, the Miniguns and the Mk-19's quickly removed them from the equation. This was only possible because the NATO fighters had been successful against the Chinese version of the Yak-38 Forger.

Back in 2004, the principal VTOL aircraft had been the British and American Harriers and the Yak-38 Forger. The Russians planned Yak-141 never got off the ground, so to speak. The Chinese longed for a VTOL aircraft but Russia didn't license the Yak-38 to them. So after Russia invaded Africa, the Chinese seized the moment and stole two Forgers. The Chinese were never known for being able to properly produce turbojets and it had taken them years to duplicate the Yak-38. The problem wasn't the airframe, rather the engines. The first few aircraft had been tested in the teens and China immediately went into full production. The aircraft made possible the transport of fighter aircraft to other countries and was the seed that started the Chinese plans for the invasion of America. A full 2 years of planning had gone into the invasion before the Chinese began to implement their plan. There were ships to buy and other military hardware to produce and troops to be moved and hidden away from prying eyes.

The Yak-38 was a pretty respectable fighter, in its day, but that was then and this was the age of the F-22 Raptor and the Joint Strike Fighter, the F-35. Plans called for the F-35 to be the world's premier strike aircraft through 2040. It provided air-to-air capability second only to the F-22 air superiority fighter. The plane allowed the Air Force forces to field an almost all-stealth fighter force by 2024. The Navy and Marine variants were the first deployment of an "all-aspect" stealth airplane.

In the year 2015, the Army was fishing around for a medium caliber weapon to put on a new vehicle they were developing. They liked the Mk-19 Mod 3, but it lacked the rate of fire that they were looking for. They wanted a rotary, multi-barrel weapon that would use the existing stock of belted ammo that the Mk-19 used. The solution was rather interesting, to say the least. The A-10 Thunderbolt used a 30mm, 7 barrel cannon known as the GAU-8 Avenger. The weapon was large, weighing in at 281kg. And it had barrels about 13' long. The overall length of the weapon was an astonishing 6.4 meters.

Give an armorer a challenge and he will frequently rise to the occasion. In this case, they shortened the barrels of the Avenger to 48" and because of the tremendous reduction in weight, were able to use a much smaller drive motor. Using the linked feed system adapted from the design of the M134, the armorer then upsized the feed mechanism to feed the 40mm belted rounds. The final weapon was designated the Mk-19A5 although it might have been more appropriate to designate it as the GAU-8/B. Anyway, it was the model Mk-19A5 the Sergeants supplied the folks at LTA and thus the mystery of the Mk-19 Gatling gun can be understood.

The folks at LTA didn't know the difference between the Mod 3 and the Mod 5 Mk-19. Gary thought the Mk-19 was a Gatling gun all along and so did Clarence. Anyway, the Cavalry really liked this A5 cannon they had. It had a rate of fire of 600 rounds per minute. And as you may recall, they only wanted 4 of the weapons but had ended up with 8. And they had some extra Ma-Deuces, so in his spare time Don decided to arm the chopper. The airframe, or at least parts of it, was interchangeable with the UH-1, specifically the landing skid. It didn't take Don and his experienced crew of mechanics any time at all to mount an Mk-19A5 on one side and a Ma-Deuce on the other. The hard mounted weapons had to be aimed by pointing the chopper, but Don had that Huey experience and he rapidly recovered his skills. Does a tricked out LongRanger IV qualify as an assault helicopter?

The Doc went along with the troops when they traveled to the east, leaving his Dentist wife in charge of the medical clinic back at LTA. If an emergency, Don could always pick him up and transport him back to the ranch, but Doc felt better being with the Troop. Then when during their third encounter with the Chinese, they came under fire and a trooper was killed and two wounded, Doc was able to administer the critical care immediately, probably saving their lives. A call back to the ranch got the guns dropped off the chopper and Don airborne in minutes. Doc returned to the ranch with his two patients, performed surgery and returned to the Troop the following day. While most of their contact with the Chinese was long range using the Miniguns and the Mk-19A5's, occasionally they ended up in an unplanned face-to-face confrontation with the Chinese. Steve got clipped one day, but it was a unremarkable flesh wound and Doc debrided the wound, sewed it up and Steve kept on trucking. Just outside of Albuquerque, Derek took a 7.62mm round to his left thigh and had to be air-evacuated back to the ranch. Derek wasn't to return to the fighting anytime soon, his femur was shattered and Doc used plates and screws to hold it together.

And, if that weren't bad enough, The Chinese killed John, Ron's stepson and deputy di-

rector of security, along with 4 other troopers in an ambush. Ron was stoic about John's death, but Linda was beside herself. Gary and Ron were in fact quite upset and wanted to 'mount up and join the troops' but wiser heads prevailed on those two occasions. The geezers were told that someone with maturity and combat sense had to stay and supervise the protection of the ranch. But apparently John's loss hit Ron harder than anyone thought. On August 13, 2024, a month before his 83rd birthday, Ron Green died peacefully in his sleep.

Ron and Gary had been friends from October of 1992, 32 years. And Ron had known Clarence longer than Gary. Ron's death took the sap out of the men and they hung up their guns. They still watched the war on TV, but you could tell that they were just watching it to have something to do. Every morning the two old men walked to Ron's grave and poured a cup of coffee on it. It wasn't an official morning until the 3 men had their cup of coffee together. Clarence snapped out of the doldrums much faster than Gary, but then Clarence didn't suffer from dysthymic disorder with superimposed Major Depression Disorder. The Doc on his occasional trips back to the ranch tried various medications to snap Gary out of his funk, but as of the time that they shut down operations in mid September, he had yet to find the right combination of medications.

The men that stayed at the ranch harvested the 20 sections of soybeans and the section of corn, but they just put the crop in storage until the Troop returned. There was a certain melancholy at ranch that winter and you could almost taste it. Gary ended up spending a lot of time at the community center playing all of Ron's favorite Country Western music. And then, as fast as the dark depression settled on Gary, he snapped out of it. Clarence was most happy about that, he hated Hank Williams Sr. and hadn't heard from Lena in a long time. Gary never brought Ron's name up after that and neither did he go to the grave and have a morning cup of coffee with his pal. Somewhere deep within Gary's brain, a switch tripped and he shut off that part of his brain filled with the thoughts of his friend Ron.

The Chinese hadn't made it as far as the Americans expected. The Americans figured the Chinese would make it to the Mississippi, but the Chinese seemed to have logistic problems and were forced to forage for supplies. And rice, though a popular American food, wasn't available in any great quantity. The Army soon realized that someone had been sniping at the Chinese coattails and destroying the Chinese supplies. An investigation and a conversation with the new Sheriff of Navajo County soon led the Army to LTA. About the first thing the Army representatives noticed was the abundance of M16's. A second Lieutenant copied down a serial number and later compared it to a list from his briefcase. That explained at least some of the missing M16's taken in armory thefts. And the more the guy checked, the more he found. But, their mission at LTA wasn't to search for stolen weapons; it was to learn how the folks had done so much damage to the Chinese logistics.

Derek told the Army men the story of the newly formed 7th Mounted Cavalry and eventually showed the soldiers their equipment. When he saw the Ma-Deuces, the Miniguns and those Mk-19A5's the second Lieutenant about blew a gasket. The Captain, howev-

er, wasn't particularly interested in the stolen equipment but rather in the use it had been put to. He was especially taken with the modification to the Miniguns. (Remember the suppressors?) When they had all of the information they needed, the Army went away; but not before the Captain obtained a list of supplies from Derek that they had expended on their attacks on the Chinese. The 7th mounted Cavalry had done their damage and paid a price for it. And, even though an Army deuce and a half showed up a few weeks later, they decided that the enemy was too far away and they'd paid their dues.

In retrospect, one could probably argue that it was a poor decision that they made when they didn't pursue the Chinese during the summer of 2025, but it is so hard to say. *How many lives would have been lost that next summer had the 7th ridden again?* We'll never know the answer to that one, because they didn't ride during the summer of 2025. Between the fighting and the especially severe winter of 2024-2025, the Chinese lost almost 5 million troops, dropping their strength to a mere 7 million. One might think that 6 million Chinese were a lot of soldiers, and they were, but the Chinese had supply problems and morale problems and they had lost 29 million out of 35 million by the time the spring arrived. The spring, by the way, was much later than usual and it forced the folks at LTA and the Garst crew to pass completely on planting crops during the summer of 2025.

The Americans having survived the winter in relative comfort as compared to the Chinese, had to bridle their enthusiasm and waited until the spring thaw before they were able to strike. They were no longer practicing guerilla tactics either. The full force and fury of the American armor struck the Chinese and struck them hard. Even so, the Chinese were not defeated, because the tables were merely turned. The Chinese began to resort to guerilla tactics and they gave the Americans as good as they got the previous late summer. By mid June, many of the Chinese had been routed, or so it appeared. And then came the 250th anniversary of the Declaration of Independence, July 4th, 2025, another date that would live in infamy.

All About the Weather – Chapter 33 – The Big Birthday Bash

The Captain was named Nathan Cutting Brittles and he was a Mustang. He'd put in many years in the enlisted ranks and then for service above and beyond, had been sent to OTS. It was tough for him at OTS. He'd made it through the 12-week basic program by the skin of his teeth. After that, promotions had come slowly, perhaps because of his age. His father was a great John Wayne fan, which probably explained why he had the name that he did. The 2nd Lieutenant was one of those ROTC types and he was eager as hell for a promotion. The ROTC boy and Nat had a long discussion on the way back to the post. Nat was appreciative of all the 7th Mounted Cavalry had done but that butterbar couldn't see the forest for the trees. It was obvious to Nat that the kid was going to make trouble for those folks at LTA so he did the only thing he could. He ordered the kid to keep his mouth shut about LTA and then had orders cut sending the kid to the front lines where he belonged. A stray Chinese bullet eventually ensured the kid's silence, permanently.

The Chinese had noted that during the summer of 2024, they had virtually no contact with the Americans on their Independence Day. They concluded, rightly, that the Americans valued the holiday perhaps above all others. When someone pointed out that July 4, 2025 was the 250th Anniversary of the United States, the commanding general of the remaining Chinese forces began to hatch an idea. He quickly developed a plan not unlike the Tet offensive staged by the Vietnamese during their war for independence. Like his predecessor Vo Nguyen Giap, he planned a series of audacious, prominent raids across the country, involving every significant city and utilizing almost every unit, resulting in nearly forty major attacks and countless smaller incidents. In pure military terms the Tet offensive was almost madness, but Giap was pursuing the overall policy and was acutely aware that the weaknesses in US military policy could produce success in the longer term from a short term disaster. He also strongly hoped that the NLF and NVA efforts would provoke a general popular uprising in the south.

The Tet offensive had convinced the US that the war in South Vietnam was unwinnable. The Chinese General didn't believe that would happen this time, the Americans were fighting to preserve their homeland, but, it would perhaps catch large numbers of the American forces with their guard down, just as the Tet offensive had in Vietnam. It was a bold move to attack the Americans on their Independence Day, but it might even the score a little and cut the Americans down a notch or two. With an audacity born of desperation, the plans went forward. The Chinese General had no illusions; this bold move would no doubt anger the Americans. He did, however, underestimate how much it would anger the Americans.

In cities around the US away from the front lines of the continuing conflict, great celebrations were planned. Even at LTA, a celebration beyond any in recent memory was in the works. As America prepared for the celebration, the Chinese prepared for the attack. As earlier noted, the new Chairman of the Joint Chiefs was a student of history. He authorized the military to stand down to celebrate the 4th, but he also gave firm orders that they remain on full alert. His father had been killed during the Tet offensive

and the Chairman didn't put it past the Chinese to stage an event like that on this special day.

At LTA that day, they were partying big time, but some of the men were gathered discussing of all things the A5 gun.

"All I'm saying is that we ought to be able to come up with some way to limit the number of rounds that gun fires," Derek insisted. "Since it's fired by an electrical solenoid, why can't we build an electric circuit that would only transmit electricity to the trigger solenoid for a limited period of time?"

"Basically you're suggesting a black box with a switch with positions for safe, burst and full auto, do I have that right?" Steve asked.

"That's right Steve," Derek agreed. "Look, the gun fires 600 round per minute. That's 10 rounds per second. Why can't we produce a circuit that only supplies electricity to the gun for say ½ or a full second? That would limit the number of grenades fired to 5 or 10 rounds."

"It makes sense Derek," Steve agreed, "I'll get some of those Whiz Kids working on a circuit like that and we'll try it out."

East of Albuquerque...

The Chinese Major didn't think much of this plan that had been hatched. Even if they caught the Americans with their guard down, his command faced the possibility of getting cut to ribbons. But, he and his 600 infantry men had re-covered ground that had been costly to take in the first place and they were in the Albuquerque area. The citizens of this city had organized a parade despite the war being fought at the New Mexico-Texas border. His men were strung out along the parade route although back a ways from the actual street itself. At 11:00am just as the front elements of the parade approached what the Major assumed was the end of the route, he gave the command to open fire. What ensued could only be described as a massacre. Although there was an ample police presence, the attack caught the citizens of Albuquerque completely unawares and the onlookers along the parade route were mowed down like wheat before a scythe. And, practically before the police had a chance to react, the Major withdrew his forces and headed west.

In those 40 odd cities that the General directed to be attacked, the story was much the same. Large numbers of civilians fell before the onslaught. You didn't actually think that the General would be foolish enough to attack military bases, did you? The news networks immediately began to broadcast news of the attacks. The news came in sporadically, but in some cities, news cameramen had actually recorded the attacks as they occurred. And, the networks selected the worst of the footage to broadcast. Tens of thousands of American civilians had been killed and perhaps the wounded ran in the hundreds of thousands. Actually there hadn't been time to get a body count and it was

like 11Sep01, with the media broadcasting greatly exaggerated numbers. Remember 11Sep01? According to early reports, perhaps 25,000 and as many as 50,000 had been killed in the attack of the World Trade Center. The final figures were below 3,000, but that hadn't stopped the media from speculating.

The General should have attacked the military bases. He might have lost more forces in the attacks, but it might not have cost him the war. There wasn't much celebrating on the 250th anniversary of the US's Declaration of Independence. A lot of people went through the motions, the food had been prepared, but their ire was rising and stuck in their throats. At LTA, about half of the Troop wanted to saddle up and chase down those 'slant-eyed devils', but cooler heads prevailed. They did play Boots and Saddles to put the ranch on alert and their issued the weapons once again. But there would not be a pell-mell rush to glory. Gary and Clarence and the 3 wives saw to that. They told the people to take their time and get organized. There would be lots of fighting in the days to come.

The Whiz Kids quickly assembled a circuit that would safe the Mk-19's or allow 10, 25, and 50 round bursts in addition to the full auto position. It was easier than a Science Fair project. They manufactured 8 of the control boxes and before the 5th of July had burst upon the scene, had installed the devices on all 8 of the Mk-19A5s. Steve and Derek pretty much agreed with Gary and Clarence and Steve relented and allowed some planning of defensive fortifications. Patton had been speaking about things like the Maginot or Siegfried lines, not a few well placed weapons to protect a housing area, although I suppose the principle is the same. All LTA had were those small raised earthen works that were seeded with mines. They took down the warning signs and moved the extra Mk-19's and Ma-Deuces to the top of the rises under the pine trees. Although they considered it unlikely that they faced an attack from the enemy, it never hurt to be a little prepared.

It took the Chinese Major several days to move his forces from the Albuquerque area to eastern Arizona. They bypassed the cities along the way, but generally followed I-40. The plan was to get to some of the west coast cities and shed the uniforms and blend in with the survivors of the communities that they had blown through in 2024. Take the uniform off of a Chinese soldier and put him in civilian clothes and he'd blend in the Chinatowns. But it was still 600 miles or so to Los Angeles, the nearest community with a large Chinese population. To compound his problems they were running short of rations and they were scouring the country, albeit away from the towns, looking for food. On the 5th day, they happened on what appeared to be a large farm between Holbrook and Winslow.

The Major decided to see what he could find to feed his troops. Surely a farm wouldn't offer much resistance, even a farm as large as this, the others hadn't. Off in the distance he heard an unfamiliar bugle call playing over loud speakers. He wondered if that meant that this large farm had a military contingent assigned to guard it. Probably not, he concluded, his hunger outweighing his good sense and combat training. In the distance, his scouts had spied a compound, ringed in a raised earthen work and sheltered

on at least 3 sides by a stand of pine trees. This must be where the farmers were holed up he concluded and he quickly organized his force of 600 to assault the compound. The Major should have stayed in bed that day; he'd just made the worst decision of his military career. The good news was that this would be his last decision of his military career. The bad news was that he was about to bring unimaginable grief to LTA.

Don had spotted the group of Chinese that he estimated amounted to about a Battalion from his chopper. Derek directed Don to RTB and refuel. When these soldiers attacked, Don could come in from behind them and put that Ma-Deuce and Mk-19A5 to good use. Boots and Saddles came forth from the loudspeakers and the Troop and the rest of the men and part of the women positioned themselves to repel the looming attack by the Chinese. Gary and Clarence turned up lugging their 7.62 rifles. No one, they said, was going to interfere with them helping out in the defenses of LTA. Frankly, Derek had no idea where the men got the strength to carry the loads they were hauling; they had lots of magazines and were bursting with energy. Maybe they'd been taking bennies, Derek thought. But, he didn't have time to argue with them and he let them go ahead to the eastern border of the compound.

"I'll tell you what, partner," Gary said to Clarence, "This is what this whole thing has been about. We fought the weather and won. Now we're going to kill us some chinks and show them SOBs that LTA is no place to mess with."

"I don't know Gar-Bear," Clarence said, "This fighting is for young men. Don't you think that we'd be better off commanding from the rear?"

"Maybe, Clarence," Gary agreed, "But they outnumber us two to one, so if we can kill a couple of them it will even things out a bit."

"Why did you take the scope off your rifle?" Clarence asked.

"Because, my friend," Gary responded, "My eyes are so bad that the sights don't do me any good. I just plan to point and shoot."

"I'm not any better off than you are Gary," Clarence admitted. "But I suppose we can at least lay down suppressing fire, even if we can't hit any of them."

"I wish Ron were alive to see this day," Gary remarked.

"I do believe that this is the first time I've heard you mention his name in months," Clarence said. "What brought that up?"

"I don't really know buddy," Gary said, "But old Ronald McDonald has been on my mind as of late. I'm sure he'd have rather gone down fighting that dying in bed like he did."

"Don't talk like that Gary," Clarence snapped. "If you think we're going to get killed in this fight, then we'd better just turn around and head to the rear."

“You go ahead if you want, Clarence,” Gary said. “I’m staying. We’ve spent 20 years getting LTA to be a wholly self-sustaining operation and ain’t no damned Chinese gonna change that.”

“You just make sure that you’re in a foxhole Gary,” Clarence said. “You should be safe there.”

The Chinese Major had his troops in position and he ordered the assault. All of a sudden the residents of the farm opened up on his troops. The volume of fire was heavier than anything he could have ever imagined. These people seemed to be pretty well armed. And, when his soldiers made it through the barbed wire fence, they started setting off land mines. Land mines? What the hell? He recognized the sound of the Ma-Deuce, but he hadn’t heard the sound of the artillery pieces these people had. It was almost like a whirring sound those Vulcan cannons on aircraft put out. He was just about to call a halt to the attack when he took a round right between the eyes.

“I think I got me one,” Gary shouted.

“Lucky shot,” Clarence shouted back over the roar of gunfire.

Just about then, Don came in behind the attacking Chinese forces and his Ma-Deuce and Mk-19A5 cut the attackers down like, well, wheat before a scythe. When the last Chinese soldier fell, Clarence turned to Gary to tell him that they’d done it. Gary was slumped forward in his foxhole, half in and half out. Clarence dropped his FAL and quickly rushed to Gary’s side. He rolled Gary back and saw the wound. He looked at the ground and could see where the Chinese round had hit and glanced up catching his friend right under the chin. Gary had never known what had hit him.

Surprisingly, not many people from LTA had been killed that day. There were a fair number of wounded, but few dead. Derek and Damon selected a fine mahogany coffin for their father. He was buried with full military honors right next to his best friend Ron. As a veteran of the Vietnam era, Gary was entitled to the military funeral and the Army sent in a Color Guard. Needless to say, they didn’t have any trouble getting 7 men to fire the 21-gun salute. There was joy at their success over the Chinese and great sorrow at the loss of one of the founders. It had been Gary, after all, who’d found that article about abrupt climate changes and started the whole ball rolling.

The day after the funeral Clarence showed up at the gravesite. He was carrying a fifth of their fine whiskey that they’d produced from the left over alcohol. He poured ½ the bottle on Ron’s grave and ½ on Gary’s.

“There you go fellas,” Clarence murmured. “I guess it’s time you had a drink. I’m right proud of both of you. What was your sobriety date Ron, April 3, 1992? And Gary, you got those 25 years and then some. January 2, 1999. That was a long time wasn’t it? But I knew you could do it.”

In case you haven't guessed it, Clarence, Ron and Gary were all recovering alcoholics. Clarence had about 7 years more than Ron. From time to time they'd been sorely tempted and perhaps come close, but not once in all those years had they ever taken a drink. And, close only counts in horseshoes, hand grenades and dancing.

All About the Weather – Chapter 34 – Epilogue

It fell to Clarence to record the history of LTA. But, I guess it's not time for that yet. First I have to tell you how the war turned out and the long-term effects of the climate change.

The attacks on the civilian population on July 4, 2025 po'd a lot of people but perhaps no one more than the military. With a renewed vigor, the military attacked the Chinese with everything at their disposal. They brought weapon systems out of retirement like napalm. And they attacked the Chinese 24-hours a day. The order went out that they were to take no prisoners. That may give you an idea of just how mad the NATO forces were. And, with the onset of winter, the Americans didn't stop. Believe me, it was not a good time in America to be of Chinese extraction. There were many battles but Clarence had stopped following the news of the war. He contented himself to write up the story of LTA.

It wasn't until the summer of 2026 that the Chinese were finally subdued. Many threw down their arms and surrendered to the Americans when it became apparent that they were about to be wiped out. But no one rescinded the standing order and the Americans simply shot the Chinese and dumped the bodies into mass graves. Perhaps if there had still been a UN, there might have been calls for trials for genocide. But the UN was another victim of the weather and didn't exist anymore.

Around the planet known as Earth, many things had changed. Perhaps feeling that Allah had taken his revenge on the Crusaders, the Muslims called an end to the jihad that had started centuries before at the time of the great Crusades. Industrialized nations coped with the climate change as best as they could. The elimination of fossil fuels was perhaps responsible in a large part with how it all turned out. Over the course of the 21st Century, the Gulf Stream slowly began to flow again, carrying the warm waters to Europe. The glacial advances in the north halted and then began to recede. Eventually, the climate returned to normal, but not before they had many long cold winters and many seasons of crop failures.

The people at LTA never were called upon to fight another battle against their fellow man. They had many battles with the weather, but in the fullness of time they even removed what remained of the minefield that had protected them from the Chinese in the only time the community was directly attacked. Clarence passed on about 5 years after Gary fell, having lived a full and useful life. It then fell to the descendants of the group to record what followed after. Aaron, Damon's oldest son, picked up the memoir and continued the record after his father and his uncle Derek passed on. Aaron had always been particularly fond of his grandfather and there weren't many days during the summer that he didn't put fresh flowers on the graves of The Three Amigos. But it was like with all things, when Aaron passed on the flowers stopped. Most everyone who knew the three old men was gone. And they were just grave markers, worn by the weather.

Only the name of the ranch, Los Tres Amigos kept their names in memory and then it

was only as a group, not as individuals. Hand painted oils, created using photographs, hung over a mantle in one of the community centers. Many young people looked at the photos and decided that those old guys must have been a bunch of crusty old curmudgeons. And they were that. Ronald Green, Gary Olsen and Clarence Rawlings had done what they'd set out to do. They fought and beat every enemy that faced them, except one time.

© 2011, Gary D. Ott